



REPORT

OF THE

**DIRECTOR-GENERAL
OF PUBLIC HEALTH**

FOR THE YEAR ENDED
31st DECEMBER, 1963

THE MEDICAL LIBRARY
GREATER LONDON COOPERATIVE



22501407402

1964

PARLIAMENT OF NEW SOUTH WALES



REPORT
OF THE
Director-General of Public Health
For 1963

Ordered to be printed, 10 September, 1964

Wholly set up and printed in Australia by
VICTOR C. N. BLIGHT, GOVERNMENT PRINTER, SYDNEY, NEW SOUTH WALES

—
1965

P 77625—1 1964—20

[26s. 6d. (\$2.65)]

THE MEDICAL LIBRARY
GREATER LONDON COUNCIL

29 JUN 1965.

WILSON INSTITUTE
+
Ann Rep
WA28
.KAS
N83

1963

CONTENTS

	PAGE
Letter of Presentation from the Director-General of Public Health to The Honourable W. F. Sheahan, Q.C., LL.B., M.L.A., Minister for Health	7
STATE HEALTH SERVICES	
Report of the Director of State Health Services to the Director-General of Public Health	9
VITAL STATISTICS	
Vital Statistics of New South Wales for the year 1963	23
COMMUNICABLE DISEASES	
Epidemiology—Report by the Director of Epidemiology (Dr. H. C. Johnston)	30
Venereal Diseases—Report by the Director of Epidemiology (Dr. H. C. Johnston)	34
Tuberculosis—Report by the Director, Division of Tuberculosis (Dr. K. W. Harris)	39
Poliomyelitis—Report by the Medical Officer (Dr. R. W. D. Maxwell)	62
Leprosy—Report on Leper Lazaret for 1963	65
PUBLIC HEALTH ADMINISTRATION	
Government Analyst—Report by Government Analyst (Mr. E. S. Ogg)	66
Pure Food—Report by Chief Food Inspector (Mr. W. J. Madgwick)	73
Health Inspection—Report by Chief Health Inspector (Mr. K. R. Horne)	77
Private Hospitals—Report by Medical Officer (Dr. R. Y. Dunlop)	78
Forensic Medicine—Report by Director of Division of Forensic Medicine (Dr. J. Laing)	82
Publicity—Report by Publicity Officer (Mr. A. G. Keep)	84
Medical Examination Centre (Dr. G. J. Duncan)	86
PREVENTIVE MEDICINE	
Maternal and Baby Welfare—Report by Director of Maternal and Baby Welfare (Dr. Grace J. Browne)	89
Occupational Health—Report by Director of Division of Occupational Health (Dr. A. Bell).. .. .	107
School Medical Service—Report by Director of Division of School Medical Service (Dr. N. Solomons)	128
Dental Services—Report by Director of Division of Dental Services (Mr. W. B. Haymet)	147
NUTRITION	
Report by Senior Dietitian (Miss R. Stern)	151
THE PHYSICALLY HANDICAPPED	
Report by the Medical Officer to the Consultative Council for the Physically Handicapped (Dr. R. W. D. Maxwell)	153
HEALTH DISTRICTS	
Metropolitan Health District—Report by Medical Officer of Health (Dr. A. Douglas).. .. .	157
Newcastle Health District—Report by the Medical Officer of Health (Dr. H. R. Dugdale)	161
South Coast Health District—Report by the Medical Officer of Health (Dr. E. Wallace)	166
Western Health District—Report by the Medical Officer of Health (Dr. T. F. Rennie)	171
North Coast Health District—Report by the Medical Officer of Health (Dr. I. K. Hay)	174
North Western Health District—Report by the Medical Officer of Health (Dr. J. Henson)	180
Broken Hill and District—Report by the Medical Officer (Dr. J. T. Cullen)	183
CLINICAL PATHOLOGY AND MEDICAL RESEARCH	
The Institute of Clinical Pathology and Medical Research—Report by the Director (Dr. H. Kramer)	185
STATE HOSPITALS AND HOMES	
Report by the Director, Division of Establishments to the Director-General of Public Health	201
STATE HOSPITALS AND HOMES	
Lidcombe Hospital and Home	202
Strickland House, Vacluse	204
Newington Hospital and Home	205
Randwick Chest Hospital	205
Garrawarra Hospital, Waterfall.. .. .	209
David Berry Hospital	210
State Hospitals and Homes—Financial Statistical Summary	211

Report of the Director-General of Public Health

TO

The Honourable The Minister for Health

The Hon. W. F. SHEAHAN, Q.C., LL.B., M.L.A.

Sir,

I have the honour to present my Annual Report for the year ended 31st December, 1963. Included in the Report is detailed information in respect to the various Sections, Branches and Divisions of the Department, in addition to which I now wish to bring to your notice the following matters of major interest in the field of Public Health.

With the approval of the Government, I was privileged, with Dr. John Lindell, Chairman of the Victorian Hospitals and Charities Commission, to visit Canada during the period April to August, 1963, to make a comparative study of systems of medical administration in that country. Both Australia and Canada have much in common in respect to size, isolated pockets of population in the larger cities and towns, extremes of climates and in the economic structure. Politically there is also similarity in that the Provinces in Canada correspond broadly to the States in Australia, with their own legislature, while each country has a central Federal Government with its own authorities defined. I feel that the visit was most instructive and should prove of benefit to this State as ensuing recommendations can be implemented.

The Health Advisory Council continued to meet at intervals during the year, and although it did not confine itself to a particular project in this period, consideration was given to matters of Public Health in this State, with particular reference to the future functions of the Council. Following consideration of our report of the visit to Canada, the Council considered that it could with advantage survey and evaluate the function, organisation and role of the health services in New South Wales, with a view to providing at all levels, the most efficient and comprehensive health service possible, consistent with the economic resources of the State. This project, having received your approval, will be commenced in 1964.

It is pleasing to report the continued improvement in maternal and infant welfare in the State. A further slight decrease in maternal deaths was recorded in 1963, the figure being 0.32 per 1,000 live births. When it is remembered that the comparative figure in 1940 was 4.23 per 1,000 live births, there is cause for satisfaction.

Special attention has been given by the Division of Maternal and Baby Welfare to the instance of staphylococcal infection in obstetric hospitals, and Medical Officers of the Division have visited those hospitals where infection was known to be high.

The continued decrease in the reported number of communicable diseases is worthy of mention, and special reference might be made to poliomyelitis, there being only three confirmed cases during the year, with no deaths recorded.

The high incidence of venereal disease, especially syphilis, continues to cause concern to this State, and to other States and countries. A factor in this incidence in New South Wales is multiple infection from single sources. Contemplated amendments to the Venereal Diseases Act envisage compulsory examination of contacts to assist in the control of this avenue of infection.

A special Medical Examination Branch was opened in May 1963, at which most of the medical examination for the Public Service will be conducted, thus providing a much improved service.

The operations of the Division of Occupational Health continue to expand. An Air Pollution Control Branch has been formed within the Division to assist in the implementation of the Clean Air Act. This will be a task of some magnitude as considerable tact and understanding will be necessary until such time as industry is fully aware of its responsibilities under this Act. The Division's Noise Laboratory was completed during the year and this will no doubt prove of great value in future investigations of problems of noise. It is with pleasure that I report that Dr. Alan Bell, the Director of the Division, has been invited by World Health Organisation to become a consultant in Occupational Health, and has written for that Organisation a publication on Noise and its significance in industry.

A Child Health Centre completed at Bexley was opened early in 1963, catering for an area containing 72 schools and 43,000 school children, and its importance to the future health of the community could not be stressed too strongly. An additional Child Health Centre at Chatswood was completed in December and will be opened early in 1964, while plans for similar Centres at Yagoona and Ryde are well in hand.

The extension of Child Health Centres will enable the School Medical Service to deviate from the rigid pattern of routine medical examinations which has been traditional in school health work. Under this pattern the skill of the school doctor is largely dissipated in the monotonous task of examining thousands of normal school children who require no medical assistance. The Child Health Centre is a unit in a screening system to identify children in medical need, and provides a reference point where medical skills can be concentrated on the child and the family, who are most deserving and in need of these skills and facilities.

The Nutrition Section has been most active during the year under reference; completing for your information a Report on the Survey of the Dietary Habits of 700 Young Adults, which was also published in the Commonwealth booklet "Food and Nutrition". This Section also completed a draft report of a Dietary Survey of 1,200 ten-year-old school children. This latter survey indicated that there was a possible protein deficiency in food intake among school children of this age. This finding does not have any marked nutritional significance, but may lead to a further survey of food facilities and in particular the School Tuck Shops.

The Consultative Council for the Physically Handicapped met at bi-monthly intervals during 1963, and held one special meeting to consider a report of a Sub Committee set up by the Council to inquire into the occurrence in this State of congenital malformations in infants, associated with ingestion of thalidomide by mothers during pregnancy. Of nineteen babies with malformations definitely or probably due to thalidomide, ten had died. It was also disclosed that there were nine other surviving babies with malformations that could not be definitely associated with thalidomide. Action is in hand through the Royal Alexandra Hospital for Children to establish a follow up and amputee clinic to provide for the mental and physical rehabilitation of these children.

Progress has been made in the care of the aged, perhaps the most important step being approval to appoint a Director of Geriatrics. It is confidently expected that this appointment will be made early in 1964, when an integrated programme of social and medical assistance for the aged can be developed.

Additional accommodation for the indigent sick aged will become available at Garrawarra Hospital when renovations in progress are completed and this will permit of the closing of Newington Hospital. A modern Nurses' Home is under construction at Garrawarra Hospital to accommodate the additional staff to be appointed to that Hospital.

It is somewhat disappointing that we have not been able to fill all the vacancies for School Dental Officers, and this has had some effect on the planned work of the Division of Dental Services. However, a high standard of work has been maintained and two additional mobile dental clinics were completed during the year. Following the visit of the Director of this Division to New Zealand in 1962, consideration has been given to the use of Dental Nurses in the school dental programme in this State. If negotiations between the Department and the Australian Dental Association can be satisfactorily completed it should be possible to make the necessary legislative amendments to provide for the employment of these nurses.

There has been further acceleration in the rate of growth in the amount of work carried out by almost every section of the Institute of Clinical Pathology and Medical Research, and its resources are now used by a great number of the hospitals and medical practitioners in the State. I might specifically mention the Department of Exfoliative Cytology which examined 37,538 cervical smears during the year, compared with 15,680 in 1962. From these examinations, 271 abnormalities were revealed, of which 169 required investigation by biopsy. It will be appreciated that quite a number of lives will have been saved or considerably prolonged by this service.

With the concurrence of the Government, I have relinquished the position of Director General of State Psychiatric Services. This position has been advertised in this and other States of the Commonwealth, in Great Britain, South Africa and Canada, and although several firm applications were received, it has not as yet been possible to make an appointment to the position.

Yours faithfully,

C. J. CUMMINS,
Director General of Public Health.

STATE HEALTH SERVICES

Report of the Director of State Health Services to the Director-General of Public Health

The Annual Reports for 1963 of the Divisions, Branches and Sections of the Department are presented.

Office accommodation has not been completed at Cootamundra, which will be the headquarters of the Riverina Health District, so proclamation of the District has not been possible during 1963.

Public health work in the Health Districts has continued to expand and Medical Officers of Health are now wholly responsible for the School Medical Service; Tuberculosis Control; Maternal and Baby Welfare; Pure Food; and Private Hospitals and Rest Homes in each of their Districts. Much more environmental hygiene work has been carried out during the year, frequently in co-operation with the Officers of the local health authorities.

There was an upsurge of diphtheria in the State when 39 cases occurred with four deaths, but the disease was soon curtailed when adequate immunisation programmes were put into action. It was encouraging to note though the low incidence of poliomyelitis following successful immunisation programmes in 1961-62 and only three confirmed cases occurred in the State with no deaths.

The year 1963 was marked by a complete revision of the role and the establishment of the Division of Forensic Medicine which now concentrates only on forensic duties. The changes which took place were the transfer of the medical examination of staff to the Medical Examination Centre; the Director of the Division relinquished the title of Police Surgeon and the medical examinations of the Police Force are now conducted by a full-time medical officer seconded to the Police Department; and the control of Hospital Admission Depot was taken over by the Division of Epidemiology.

The Medical Examination Centre was opened on 20th May, 1963. Here all applications for State employment were medically examined except employees seeking employment in the Departments of Transport and Prisons; members of the Police Force; or Electricity Commission employees. Teachers or Trainee Teachers were also examined at the Centre which relieved the School Medical Service of this work.

The Government Analyst's Branch held three fluoridation courses which were attended by 28 persons engaged or likely to be engaged in fluoridation plant operations.

For the first time for many years the Department entered an exhibit at the 1963 Royal Easter Show. A feature of the exhibit was fluoridated water which was sampled by 38,000 persons.

Dr. Krister returned from the ad hoc course in Health Education with the Faculty of Applied Psychology of the University of New South Wales, and took up his appointment as Departmental Health Educationist. A long term programme of Health Education has been prepared for implementation.

Conferences with the Directors of Divisions and the Metropolitan Medical Officer of Health have been held regularly, and the three monthly Conferences with Medical Officers of Health and Directors of Divisions have continued in 1963. These are valuable Conferences and afford Directors of Divisions and Medical Officers of Health an opportunity of discussing their problems.

Further work in 1963 has been carried out on the review of the Public Health Act, 1902, as amended, but this work is not yet finalised.

The year, generally, has been one of progress, again, in many fields of public health and this Report will convey a general uptrend in achievements by the Department.

The Standing Committee for the Control of Pollution of Waters in New South Wales has continued to meet during the year. Various projects referred to the Standing Committee from the metropolitan and country areas are at present under survey through sub-committees arranged for the purpose.

The Serology Laboratory of the Division of Epidemiology and now located at Lidcombe was selected by the National Health and Medical Research Council for the establishment of a Syphilis Reference Laboratory where special investigations, including the Treponema Pallidum Immobilisation Test are to be carried out for Australia.

The Institute of Clinical Pathology and Medical Research has been nominated as a national reference laboratory by the National Health and Medical Research Council for the identification of Coxsackie viruses.

VITAL STATISTICS

Vital Statistics for New South Wales, 1963

The population at the end of 1963 was 4,086,293. During the year the increase in population, by excess of births over deaths, was 46,839, and by migration 22,819, making a total increase for the year of 69,658. The total live births were 84,065, equivalent to 20.75 per 1,000 of the mean population. The number of stillbirths registered was 1,165, equal to 1.37 per 1,000 total births (live and still). Deaths during the year numbered 37,226, equivalent to a rate of 9.19 per 1,000 of population. The number of infants under one year of age who died was 1,673, equal to 19.90 per 1,000 live births. The infant death rate for the Sydney Metropolitan area was lower than that for the remainder of the State; the rates being 18.18 and 21.73 per 1,000 live births respectively.

COMMUNICABLE DISEASES

Epidemiology

The number of cases of communicable diseases notified during 1963, was 6,012 or 141 fewer than those notified in 1962. There were 50 fewer deaths, this figure amounting to 316 (366 in 1962).

Acute Anterior Poliomyelitis. Only 3 cases occurred in the State with no deaths.

Diphtheria. There was an upsurge of diphtheria in New South Wales when 39 cases occurred with 4 deaths. The disease was soon curtailed when adequate immunisation programmes were put into action.

Infectious Hepatitis. Again during the year, the figure for notifications fell (by 470) to 2,832 with 17 deaths.

Tuberculosis (all forms). There were 1,375 cases of tuberculosis (all forms) notified in 1963, of which 1,039 were active cases of pulmonary tuberculosis. Deaths recorded numbered 185 (all forms) of which 156 were due to pulmonary tuberculosis.

Venereal Disease

There was a slight decrease in the overall total number of venereal disease notifications during 1963, the figure amounting to 4,313, compared with 4,403 in 1962; and this decrease was, in the main, due to a fall in notifications of syphilis—3,625 compared with 3,736 notifications during the previous year.

Notifications for gonorrhoea, 499, showed an increase of 52 over the 1962 figure. The sex ratio for syphilis and gonorrhoea during 1963 was 1.8 and 5.3 males to one female respectively, compared with 2.8 and 7.3 in the previous year. The number of non-gonococcal urethritis cases treated at the Clinic fell from 1,743 in 1962 to 1,493 in 1963.

The Serological Laboratory received 30,613 specimens and carried out 102,853 tests on these specimens during the year.

Patients attending the venereal disease clinic during 1963, numbered 6,178 and of these, 1,878 were found to be suffering from venereal disease. Defaulters numbered 1,075 compared with 1,474 in 1962. The first prosecution of its kind was taken under the Venereal Diseases Act, 1918, as amended, for “knowingly infecting with venereal disease” when the male pleaded guilty and he was sentenced to 9 months hard labour. Summonses for failure to continue treatment numbered 642 compared with 746 in 1962.

Tuberculosis

The number of new cases of tuberculosis (all forms) notified during 1963 was 1,375 (963 males and 412 females) of which 1,039 notifications were of active cases of pulmonary tuberculosis. The number of deaths from tuberculosis (all forms) was 185 of which 156 were deaths from pulmonary tuberculosis.

Some radical improvements, changes and events took place during 1963, the most outstanding of which were the implementation of compulsory X-rays during mass miniature X-ray surveys; action by the Department of Repatriation relating to recalcitrant tuberculous patients; the transfer of Epidemiological Surveys to the School Medical Service; the Commonwealth Minister for Health's Conference dealing with the unification of nation-wide tuberculosis programmes; and the use of 70 m.m. X-ray machines in Psychiatric and General Hospitals.

The total number of persons X-rayed during mass miniature surveys was 346,476; an increase of 70,147 over the 1962 figure.

The number of films processed and examined at the Chest X-ray Centre, 697 George Street, Sydney, was 47,512; an increase of 8,636.

The number of persons X-rayed during special surveys in gaols; the University of Sydney and various Navy, Army and R.A.A.F. Units was 12,726.

The number of persons X-rayed at the Anti-Tuberculosis Association Clinics was 438,667 in the Metropolitan area, and 147,256 in Country areas. These X-rays resulted in the discovery of 131 active cases of tuberculosis.

Mass Tuberculin Surveys were carried out throughout the State and again the North Coast areas showed greater reactor rates (Casino 24.6 per cent), than the Southern Tablelands (Cooma 4.4 per cent).

The Visiting Nursing Service made 25,173 home visits during the year, and although this was a decrease of 3,387 visits over the 1962 figure an increase of work at the tuberculosis clinics was carried out by the Sisters of this Section of the Division.

The number of cases receiving tuberculosis allowances in 1963, was 571, an increase of 31 persons compared with the 1962 figure.

Separate reports of Tuberculosis work in the Health Districts will be found in the text of the Report under Health Districts.

Poliomyelitis

The year 1963 was one of exceptionally low incidence of poliomyelitis throughout the State and only three cases were accepted by the Poliomyelitis Surveillance Committee as confirmed Poliomyelitis (two cases occurred in Sydney and one case in Gunnedah), and none of these cases had had any vaccination against the disease. There were no deaths from Poliomyelitis in 1963.

Since the abrupt termination, at the end of May, 1962, of the outbreak of poliomyelitis, which occurred in New South Wales over 1961 and 1962, only six further cases have occurred over the following period of 19 months to 31st December, 1963.

Quantities of poliomyelitis vaccine, issued to local authorities, and private medical practitioners, during 1963, amounted to 788,318 doses (1,961,764 doses); while persons inoculated at the Immunisation Centre during the year numbered 22,625 (71,200). The figures in parenthesis are totals for 1962.

The above figures are in some ways not comparable, for the introduction of the fourth dose for poliomyelitis brought forward a further large number of persons who, having completed their first three injections at any time in the past, became eligible to receive this additional "booster" dose.

Protection rates in age groups in the fully vaccinated and the unvaccinated are given in the Report and it is evident that poliomyelitis vaccine provided significantly less protection against Type 3 poliovirus than against Type 1.

Leprosy

Four cases of leprosy were admitted or re-admitted to the Lazaret during the year and one case was discharged. Remaining in the Lazaret at 31st December, 1963, were six males and five females.

The net cost to the State in respect of maintenance was £11,294 13s. 5d., making an average cost of £1,590 16s. 11d. per inmate per annum.

PUBLIC HEALTH ADMINISTRATION

Government Analyst

During 1963, a total of 28,503 samples were examined by the Government Analyst's Branch compared with 39,904 samples in 1962. These were distributed as follows: Pure Food Act 16,507; Government Institutions and Statutory Authorities 3,379; Food bacteriology 228; water bacteriology 6,228; and miscellaneous examinations 2,161.

Milk samples examined totalled 11,102; an increase of 7 per cent over the 1962 figure. While there was a fall in the number of adulterated milk samples in the Metropolitan Area there was a rise of over 100 per cent of adulterated samples in the country areas.

The reduction of meat samples from 7,017 in 1962 to 4,194 in 1963, was the result of "on the spot" field tests carried out using a dye stuff known as Malachite Green for the detection of the improper use of the preservative sulphur dioxide in meats.

Samples of mussels, par-cooked sausages, oysters and egg pulp were examined in the bacteriological section of the laboratory during 1963, and while no Salmonella organisms were found in these samples, faecal pollution of some of these foodstuffs was evident.

Routine analyses of Town water samples submitted by the Department of Public Works and water samples from private supplies continued to be examined during the year. At the same time the Branch undertook increased analyses of samples of sewage effluent from treatment works and streams polluted with both domestic and industrial wastes.

Interest in fluoridation continued to increase during 1963, and three fluoridation courses were held which were attended by 28 persons engaged or likely to be engaged in fluoridation plant operations.

Drug samples submitted from the Government Stores Department, the Police Department, medical practitioners and hospitals and the Food Inspection Branch totalled 263.

In the Biochemical Laboratory of the Branch 968 examinations for blood alcohol were carried out; while 210 determinations were made on post mortem blood specimens for cholinesterase. In addition 83 specimens of blood were examined in connection with carbon monoxide poisoning; and 776 determinations for trace elements were carried out (lead, arsenic, mercury, thallium and other elements).

During the year, 569 cases involving the post-mortem analyses of human viscera and exhibits relative thereto were completed; while 144 investigations were carried out at the request of the Police Department.

Finally, 1,121 prostatic smears were examined and 235 cultures for sensitivity were made; while 805 rats were examined for plague.

Pure Food

During 1963, a total of 7,098 samples comprising a wide variety of food and drugs were submitted for analyses by the Branch Inspectors and of these 854 were found to be adulterated. Legal proceedings were taken in 700 cases while an additional 154 traders received warning letters. Fines and costs imposed during 1963, for the sale of adulterated food, amounted to £8,270.

Seizures and destruction of deteriorated food and drugs comprised 29 tons; 12,516 head of poultry; and 2,271 cartons, bottles and tins.

The number of premises inspected in 1963 totalled 9,108 and 257 warning notices were dispatched to occupiers; while 23 prosecutions were instituted with £607 imposed in fines and costs.

A total of 104 samples of food was submitted for bacteriological examination including 45 samples of oysters; 37 samples of desiccated coconut; and 12 samples of sausages. Although none of the oyster samples were found to contain pathogenic organisms, some of the oysters showed gross contamination as a result of which the Department considered legislation to require the depuration of all oysters by subjecting them, whilst in the shell after harvesting, to ultra violet light treatment in holding tanks for a period of 48 hours. No pathogenic organisms were found in the desiccated coconut; but the sausages which were precooked and frozen showed the original organisms present in the samples although there had been no bacterial proliferation.

Health Inspection

Approval was given in 1963, for the creation of positions for two Senior Health Inspectors, and an additional eight Health Inspectors at Head Office.

The Branch dealt with 69,706 applications for searches in connection with unhealthy building land notified under the Public Health Act, 1902-1952. Six new areas were notified as unsuitable for building purposes, and following satisfactory compliance with Departmental requirements, the notification of three old areas were revoked.

Short courses on Water Fluoridation Practice and Court Procedure were held in Sydney during 1963.

Routine work carried out by the Branch during the year, included the inspection of 141 shops and buildings; the inspection of 66 hotels, public halls and theatres; the inspection of 20 camping areas, showgrounds and cemeteries; while 1,219 septic tank applications were recommended for approval. Additionally, 189 unhealthy building land inspections were made and 232 surveys were carried out.

Private Hospitals and Rest Homes

At 31st December, 1963, there were 205 (210) Private Hospitals in the State; while Rest Homes numbered 322 (276).

The number of available beds in Private Hospitals at the end of the year was 4,619 (4,295) while cots totalled 252 (231).

The number of available beds in Rest Homes at the close of 1963, was 7,497 (6,399) while cots totalled 49 (58).

(The figures in parenthesis are 1962 totals.)

Complaints from the public have been few, and the improvement in both Private Hospital and Rest Home premises has continued during 1963.

Forensic Medicine

The year 1963 was marked by a complete revision of the role and the establishment of the Division which now concentrates on forensic duties, and the following changes took place—(a) Medical examinations of staff were transferred to the Medical Examination Centre; (b) the Director of the Division relinquished the title of Police Surgeon and medical examinations of the N.S.W. Police Force are now carried out by a full-time medical officer seconded to the Police Department; (c) the control of the Hospital Admission Depot was taken over by the Division of Epidemiology; while the control of the City Morgue was transferred from the Justice Department to the Department of Public Health and the Division of Forensic Medicine is now responsible for the care and maintenance of the morgue.

For the period January to June, 1963, and before re-organisation of the Division of Forensic Medicine, the Division admitted 833 patients to Metropolitan Hospitals; 1,523 patients to State Hospitals and Homes; and 270 patients to Rest Homes. During the same period 1,456 examinations were carried out for the Police Department; and 1,589 for various other Government Departments. Finally, other medical services carried out between January and June 1963, by the Division, included 850 vaccinations against smallpox; 1,378 International Certificates issued; and 179 throat swabbings of children about to be admitted to various institutions.

During the year, 2,237 autopsies were carried out for City and Country Coroners; while 182 examinations were carried out on criminal assault cases.

The number of specimens submitted to the medico-legal laboratories numbered 3,688 during the year; and 7,878 tests were performed on these specimens.

Publicity

Local Authorities and Schools received the main bulk of the publicity material issued by the Publicity Branch in 1963, which included 853,300 pamphlets; 192,500 booklets; and 32,000 posters. A total of 247,200 medical record and poliomyelitis record cards were also distributed. In addition, 60,000 copies of *Our Babies* and 80,000 copies of *Healthy Motherhood* were sent direct to Schools or Baby Health Centres by the Government Printer.

Film screenings were made to 5,840 persons in 1963, while film loans numbered 2,012; and these loaned films were screened to audiences of 61,005 persons.

Tuberculosis surveys accounted for most of the paid press advertising during the year, and commercial radio and television stations were used and paid in connection with the Department's compulsory chest X-ray survey campaigns. Additionally, press articles for broadcasting were provided weekly by the Branch.

The theme of Health Week in 1963, was "175 Years of Progress in Health" with the slogan "Advance Australia's Health", when emphasis was placed on the numerous health services provided for prevention of sickness and their fuller use was encouraged. The need for personal and communal hygiene was stressed. An innovation during this "Week" was the publication of 70,000 copies of a Health Week Newspaper which were distributed in the Metropolitan area and Newcastle District, while 100,000 copies of a special "Health Week" pamphlet were also issued.

For the first time for many years the Department entered an exhibit at the 1963 Royal Easter Show from 5th-16th April. A feature of the exhibit was fluoridated water which was sampled by 38,000 persons.

The circulation of the quarterly journal *Health in New South Wales* increased to 14,000.

Medical Examination Centre

The Medical Examination Centre was opened on 20th May, 1963, and all applicants for employment, except employees of the Department of Government Transport; members of the Police Force; Warders of the Prisons Department; employees of the Electricity Commission of New South Wales; and employees of the Metropolitan Water, Sewerage and Drainage Board, were examined at the Centre, although in the latter three instances referral of the documents following medical examination by self-employed medical officers, was made to the Centre for assessment of medical fitness.

During the year, 5,622 examinations were carried out of Teachers' College Entrants and School Teachers. This figure included 3,149 Entrants of which 31 failed to pass the examination (13 males, 18 females); 909 applications for employment as School Teachers; and 382 review examinations of Entrants. Previously the Division of School Medical Service examined Teachers' College Entrants. Additionally, 2,600 graduates from the various Teachers' Colleges were medically examined to determine their fitness for permanent employment.

During the year also, 21 teachers (14 males and 7 females) were recommended for retirement following medical examination at the Centre.

Medical examinations carried out on persons on sick leave totalled 502 during 1963 (227 males and 275 females).

In country areas 788 persons were examined for permanent employment and 21 for fitness to continue in the Public Service.

Other examinations included 191 employees of the Maritime Services Board for full sick leave privileges; and 1,962 pensioners for transport concessions requested by the Repatriation Department.

The number of persons vaccinated against Smallpox in 1963, was 462; while 213 throat swabbings were taken from children admitted to several institutions under the control of the Child Welfare Department.

PREVENTIVE MEDICINE

Maternal and Baby Welfare

Maternal deaths again fell during the year and totalled 27, compared with 29 in 1962. The rate per 1,000 live births also fell from 0.34 in 1962, to 0.32 in 1963. One of the maternal deaths was due to criminal abortion compared with three such deaths in 1962. The Metropolitan area contributed, of the above total 10 maternal deaths with a maternal death rate of 0.23 per 1,000 live births; while the Country area of the State contributed 17 maternal deaths with a maternal death rate of 0.42 per 1,000 live births. These figures compare significantly with figures obtainable in the 1940 Annual Report when the total number of maternal deaths, in that year, was 209; the rate per 1,000 live births was 4.23; and the deaths from criminal abortion numbered 34.

During 1963, there was a decrease in deaths under one year (infant mortality) when the figure fell to 1,673 compared with 1,825 in 1962 thus giving an infant mortality rate of 19.90 per 1,000 live births compared with 21.36 per 1,000 live births in 1962. It is of interest to note that out of the above total in 1963, 1,071 infant deaths occurred within the first week of life.

Baby Health Centres increased by 12 during 1963 to a total of 402. There are now 141 of these centres in the Metropolitan area and 261 in the Country. Total attendances at these Centres numbered 1,136,655.

In 810 sessions at the Pre-Natal Clinics 17,867 women were examined. This is an increase of 2,717 over the figure for 1962.

In the 12 Paediatric Clinics conducted by the Division 1,536 cases were seen during the year, 350 of which were referred for further treatment. Additionally 2,215 children were examined in Kindergartens and Day Nurseries.

The general functions of the Division continued adequately during the year including the free consultant service during pregnancy and delivery; the service to mothers suffering from Rh incompatibility; and the mobile blood transfusion services.

Six meetings were held of the Special Medical Committee Investigating Maternal Mortality and 42 case histories of maternal deaths or deaths associated with pregnancy registered in 1963 were considered, together with 14 case histories registered in 1962.

The Division has paid more attention to the notifications of staphylococcal infection in Obstetric Hospitals and Medical Officers of the Division have visited hospitals where the infection rate was known to be high. Notifications of staphylococcal infections numbered 2,220 in 1963.

Special facilities have been given to immigrants in Migrant Hostels and Baby Health Centres will be opened in most if not all of these hostels in the near future.

Every effort is made to bring the Services of the Division to the Aboriginal Mother and her baby throughout the State and Baby Health Centres and Services on Reserves have been established.

The Special Committee on Infant Feeding set up in 1962 continued its deliberations in 1963.

Special Surveys were carried out during the year including a State wide Urine Testing Survey, using Ferric Chloride for the recognition of phenylketonuria; and a Survey of Immunisation status of Children at Baby Health Centres.

Division of Occupational Health

The activities of the Division in the fields of specific industrial hazards and diseases continued during 1963 and the numerical strength of the Division increased by 17. The majority of this increase resulted from staffing of the Air Pollution Control Branch.

The number of patients medically examined during the year was 1,124 (1,046); while blood slides examined for evidence of lead poisoning totalled 8,707 (7,502). Pathological tests carried out numbered 4,128 (3,877). Scientific visits made, including "Industrial Health", "Radiation" and "Air Pollution" visits, totalled 2,194 (2,220). The figures in parenthesis are figures shown in the 1962 Report.

Other activities of the Division in 1963, included assessing working conditions at the waterfront; the investigation of 107 cases of industrial dermatitis; the control of lead dust in factories (the importance of this section of the work is evidenced by the fact that out of a total of 8,707 blood slides examined 650 showed 3,000-5,000 stipple cell counts, while a further 263 blood slides showed 5,000 or more stipple cell counts); the investigation of chromium oxide spraying on to metal in a manner akin to metallizing; the investigation of the manufacture of inorganic mercurial compounds; the investigation of the manufacture of cadmium alloy; the investigation of the underground use of diesel operated concrete mixers; the estimation of phosphine exposure whilst unloading a cargo of ferro-silicon; while the survey, commenced in 1962, of Trichloroethylene degreasing tanks, continued in 1963. Additionally, employees exposed to toluol; a case of acute benzol poisoning and methane di-iso-cyanate exposure, during railway carriage rigid foam insulation, had the attention of the Division. Finally several work sites were visited in connection with welding and dust hazards in industry.

The Occupational Health Sister of the Division visited 71 factories in 1963, when occupational health sisters in these factories were contacted. The object of these visits was, in the main, to stress the need for trained nursing staff in factories and the creation of an atmosphere and conditions whereby the nursing staff are able to practise preventive medicine. Refresher sessions for both industrial nurses and representatives in industry were held quarterly throughout 1963.

Cholinesterase, organic phosphates, carbonates and D.D.V.P. testing continued during the year.

In the field of Agricultural Health it is intended to establish, in the near future, an Agricultural Health Laboratory in the Division's proposed new laboratories.

The Division continued to pay a great deal of attention to both the industrial and residential aspects of noise and, during the year, a noise laboratory was completed in which it is hoped to carry out hearing tests.

Despite difficulties experienced as a result of laboratory alterations, the year saw steady progress in the testing of protective devices including airline respirators and hoods; self-contained compressed air units; and half-face respirators.

During the study of ergonomics in industry by Officers of the Division, heart rates were monitored in industrial workers; while sweating, dehydration, excessively hot conditions and thermal comfort were investigated. Injuries caused by incorrect methods of manual handling continued to be a major problem for industry and the Division.

An amendment to the New South Wales Radioactive Substances Act was made on 15th October, 1963, which, in the main, cancelled the exemption from the licensing provisions of the Act, previously granted to medical practitioners, dentists and veterinary surgeons, and this resulted in a flow of new license applications. The use of ionizing radiations continues to increase, particularly in the industrial and scientific fields which necessitated 425 inspections of premises in contrast to 356 inspections in 1962. During the year, a directive issued by the Commonwealth Department of Health, required the inspection and monitoring of all radioactive substances entering Australia and the Division has co-operated in this respect.

The total number of organisations receiving film badges at the end of the year was 488 embracing 2,200 persons, compared with 421 organisations covering 2,000 persons at the end of 1962.

Regulations were drafted by the Air Pollution Advisory Committee during 1963, under the Clean Air Act, 1961. In the scientific field two small teams were established to undertake the testing of emissions of smoke from chimneys. The downward trend in the deposit gauge measurements made in 1962, in Sydney and Newcastle, continued in 1963 and figures for both Cities are given in the text of the Report. Also in the Report are details of smoke emission from heavy day industries and sulphur dioxide fumes in the Cockle Creek-Boolaroo area and the Electrolytic Refining and Smelting Company of Port Kembla.

School Medical Service

The effective strength of the staff throughout the year was again below the authorised establishment, but while the number of children medically examined in 1963 was very much reduced there was a large increase in parent interviews and also an increase in the number of atypical children given special examinations at Head Office and in the Child Health Centres. At the same time, the scheme for the medical examination of country school children expanded at the end of the year when 100 Local Government areas took part in the scheme (90 in 1962).

During the year, medical officers examined 221,503 school children of whom 145,173 were fully examined and 76,330 were reviewed out of a total school population of 837,589. Parent interviews numbered 21,460 (15,368 in 1962).

Excluding dental defects the number of defects of notifiable standard found in children fully examined was 65,495 and 52.4 per cent of these were notified to parents or guardians in order that further investigation and/or treatment could be instituted. The most important defects were vision 6.83 per cent; hearing 2.97 per cent, lungs 2.59 per cent and asthma 2.01 per cent.

Tuberculin skin testing of school children was transferred in August from the Division of Tuberculosis to the Division of School Medical Service, and all Sisters attached to the Epidemiology Section of the former Division were also transferred.

The Medical Examination Centre took over the medical examination of teachers and trainee teachers.

The Child Health Centre at Chatswood was completed in December, 1963, while plans were well on the way for two additional Child Health Centres at Yagoona and Ryde.

The In-Service Training Course in Mental Health was repeated during the year and nine medical officers attended; while the Course in Public Health Nursing was also completed by 18 nurses during 1963.

The Child Health Centre at Bexley was officially opened in May, 1963, by the Hon. W. F. Sheahan, Q.C., LL.B., M.L.A., Minister for Health. This Centre covers 72 schools and 43,000 school children. During 1963, medical officers examined 14,316 school children in the schools and 10,396 of these were full examinations. Defects excluding speech defect amounted to 14.56 per cent. Parent interviews numbered 1,312. A scheme of follow-up of notified defects was carried out by the Sisters of the Centre and 116 such visits were made to the schools where 1,271 children were interviewed; while 787 home visits were effected. It was pleasing to note that in 80 per cent of the cases referred to parents for treatment, the parents had initiated appropriate action.

The Child Health Centre at Forest Lodge continued the pattern of previous years. Full examinations were carried out on 10,672 children in 108 schools; while 7,891 children had review examinations. In addition, parents interviewed numbered 2,120. Follow-up of notified defects by the Sisters of the Centre, caused the interview of 2,305 children in the schools; while 1,318 homes were visited.

The medical officers of the Child Health Centre at Parramatta, fully examined 11,136 children; reviewed 4,195 others; and interviewed 3,607 parents. The Sisters of the Centre made 1,434 home visits; and followed-up 651 children with notifiable defects.

During 1963, at the Hearing Clinic, 430 new cases and 466 review examinations were made; while 17,646 children attended the Speech Therapy Clinics; and 1,009 appointments were kept at the Asthma Clinic.

During the year, Departmental schools and schools and homes conducted by voluntary and church organisations for the education of children with physical and/or intellectual handicaps were visited when 1,110 children were examined.

Fifteen Nursery Schools in the Metropolitan area were also visited; and 1,061 medical examinations were carried out on 625 children; while 470 parents were interviewed.

The Child Guidance Clinics functioned with a full establishment of psychiatrists, psychologists and social workers for the major part of the year. New cases seen included 1,244 at Brisbane Street; 360 at Camperdown; 268 at Forest Lodge; 402 at Parramatta; 159 at Bexley and 331 at Newcastle. At Yasmar 676 children were referred and 255 committed.

The year 1963, was the first full year of operation of the Bridge Road School. There was a continuation of difficulty in selecting suitable children for educational and psycho-therapy by School and Child Guidance teams, however, out of 100 children referred 12 children were accepted at the school for varying periods of the year.

The medical examination of special groups of children continued during 1963, and 965 examinations were carried out at Head Office; 419 at the Child Health Centre at Forest Lodge; 741 at the Child Health Centre Parramatta; and 720 at the Child Health Centre at Bexley.

All children admitted to the Stewart House Preventorium were given a full paediatric assessment by trained medical officers of the Service. The number examined during 1963 was 590 boys and 519 girls.

Dental Services

At the end of the year vacancies existed for six School Dental Officers which resulted in a decrease in output of work of the School Dental Service.

A Special Committee consisting of members of the Department of Public Health; the Department of Education; the Dental Faculty and Dental Hospital, under the Chairmanship of the Director of State Health Services, met during the year to consider dental services in general. A separate report has been forwarded to the Minister for Health.

The total output of the Division included 128,207 dental examinations, with 62,484 notifications of dental defects. Extractions amounted to 36,490; while fillings totalled 67,681. Other treatments, including prophylaxis, amounted to 72,844. The number of dentures supplied totalled 1,162.

The new static school dental clinics at Adamstown, Parramatta, Hurstville, Naremburn and Wollongong functioned well during the year; while two additional mobile dental clinics were completed during 1963. School Dental Officers contacted a total of 786 schools and of these 99 were in the Metropolitan area and 687 in the country.

The Division continued to co-operate with the Royal Flying Doctor Service, N.S.W. Section, in providing a dental service in the outback areas. The Dental Officers travelled 25,000 miles by air and 15,000 miles by road. The aerial dental service treated 648 patients in 3,416 visits. Nine hundred and thirty-nine teeth were extracted while 3,599 fillings and 2,074 other treatments were provided.

Total Dental Services to Government Institutions included 8,594 children treated in Child Welfare Homes; 12,179 patients treated in Mental Hospitals; and 3,613 patients treated in State Hospitals and Homes.

NUTRITION SECTION

Regular weekly articles, radio scripts, talks and tape recordings were made during 1963, in connection with dietary meals of the people of New South Wales. A special article was prepared for the Departmental Bulletin "Health in New South Wales" and a chapter on nutrition was written for a new Science Textbook.

Publications revised included "Food and Nutrition" and the "Low Cost Food Budget".

Lectures were given throughout the year to junior and senior Trainee Nursing Assistants; to the Kindergarten and the Sydney Day Nursery Training College Students; to the students at Karitane Mothercraft Training Centre; and to the Public Health Nurses at the Forest Lodge Child Health Centre.

The Report on the Survey of the Dietary Habits of 700 young adults which included office workers, shop assistants, factory workers and apprentices in heavy industry, University students and trainee teachers, was completed and this Report was presented to the Minister for Health. A copy of the Report was also published in the Commonwealth booklet "Food and Nutrition—Notes and Reviews" which has a wide scientific circulation in Australia.

The draft Report on the Dietary Survey of 1,200 ten year old school children in the Metropolitan area of Sydney was prepared by the Committee.

THE PHYSICALLY HANDICAPPED

The Consultative Council for the Physically Handicapped

Meetings of the Council were held each alternate month during 1963 instead of monthly; while a special general meeting was held to consider a report of a Sub-Committee which had been set up by the Council to enquire into the situation in New South Wales arising from the occurrence of congenital malformations in infants associated with ingestion of the drug thalidomide by mothers during pregnancy.

It was found that 19 babies had congenital malformations definitely or probably due to thalidomide, 10 of whom had died and it was also elicited that 9 other surviving babies born in the State had malformations either not associated or doubtfully associated with thalidomide.

The Royal Alexandra Hospital for Children was requested to set up a special clinic to medically examine and socially assess these children to determine their immediate and future needs. Eighteen children attended the clinic. Following these examinations an Amputee Clinic was formed for the prescribing and fitting of artificial limbs and appliances. By regular follow-up examinations it is hoped to prepare children for employment eventually.

In April, 1963, the Council considered a complete and comprehensive survey of all existing facilities in New South Wales for the rehabilitation of physically disabled and handicapped persons. It was proposed that the survey should cover all age groups.

Assistance to physically handicapped persons continued to be approved by the Council during the year and 107 such cases received various forms of assistance; while the Occupational Therapist visited and treated 65 patients of whom 25 were new patients referred during 1963.

Dr. Frank Cooksey, O.B.E., M.D., F.R.C.P., Director of Physical Medicine, Kings College Hospital, London, had a meeting with Council members when a discussion took place on the problems of the Physically Handicapped in the State.

HEALTH DISTRICTS

Metropolitan Health District

The estimated population of the District at 30th June, 1963, was 2,382,460, an increase of 48,020 over the figure for 1962.

There were 46,556 live births equal to a rate of 19.50 per 1,000 of mean population.

Deaths numbered 22,820 equal to a rate of 9.57 per 1,000 of mean population.

The four main causes of death were Diseases of the Heart, 8,906, Malignant Neoplasm, 3,534, Vascular Lesions affecting the Central Nervous System, 3,097 and Accidents—Poisoning and Violence, 1,441.

Maternal deaths numbered 11, equal to a rate of 0.24 per 1,000 live births.

Deaths under one year of age totalled 846, equivalent to a rate of 18.17 per 1,000 live births.

There was an upsurge in the number of diphtheria cases in the Metropolitan Area, the figure amounting to 27 with two deaths. Those Councils where the cases occurred were advised to increase their immunisation programmes. A Committee was also set up to consider the immunisation status of children which recommended a Schick Test Survey among school children attending Metropolitan State Schools.

The volume of environmental hygiene carried out during 1963 was limited by the shortage of experienced Health Inspectors in the Health Inspection Branch; and since septic tank applications and complaints increased, this work occupied the greater portion of the Health Inspectors' time.

Special investigations and work were carried out into lead poisoning from flaking paintwork; stream pollution; the sampling of mussels; and exhumations to determine the condition of bodies after varying periods of interment.

An in-training course was held during the year in Court Procedure for Health and Food Inspectors.

Routine work included the scrutiny of 8,158 septic tank applications; 10,701 septic tank site inspections; 419 nuisance investigations; the collection of 448 pathological specimens; while 756 noxious trades premises were inspected or re-inspected.

Work performed by the Pure Food Branch in the Metropolitan area included the taking of 6,893 samples of food and drugs; the issue of 369 warning letters; the condemnation of 29 tons of food and drugs; the inspection of 8,881 premises; and the institution of 636 prosecutions.

Newcastle Health District

The population of the District at 30th June, 1962, was estimated at 483,400.

There were 10,024 live births equal to a rate of 20.74 per 1,000 of population.

Deaths numbered 4,726 equal to a rate of 9.78 per 1,000 of population.

Deaths under one year numbered 220, equal to a rate of 21.95 per 1,000 live births.

Stillbirths totalled 144, equal to a rate of 0.30 per 1,000 of population and representing 1.42 per cent of all births (live and still).

The total number of communicable diseases notified during the year was 417 with 41 deaths.

A Sanitary Survey was completed, during the year, in the Municipality of Taree; while a general check was made on holiday camping areas in the District.

Investigation of water supplies in connection with fluoridation was made in Taree-Wingham, and in the Shires of Hastings and Dungog.

Environmental hygiene inspections included the inspection of 1,898 septic tank sites; and 150 complaints of nuisances were dealt with during the year.

An outbreak of diphtheria occurred in Macleay Shire causing eleven cases and one death. Four carriers from schools were isolated in hospital and an intensive immunisation campaign was commenced.

School Medical Service—The number of school children examined amounted to 22,973 and 1,444 parents were interviewed in 1963. These medical inspections were carried out in 144 of the 207 schools in the Greater Newcastle Area where 68,000 children attend.

The number of children receiving aid at the Child Guidance Clinic totalled 509; while 1,450 children were seen at the Speech Therapy Clinic. The Hearing Clinic held 52 sessions and examined 573 children.

Tuberculosis Control—During the year 493 Tuberculosis Clinic sessions were held and 9,082 persons attended; while 3,615 home visits were made.

Maternal and Baby Welfare—Attendances at Baby Health Centres in the District numbered 105,264; while 1,368 home visits were made. At the Prenatal Clinics 3,764 attendances were registered; and 49 premature babies received help in connection with feeding difficulties; while 124 visits were paid to these homes.

Private Hospitals—Rest Homes and Private Hospitals inspected numbered 52 and 40 respectively; while 132 interviews were accorded to licensees.

South Coast Health District

The population of the District at 30th June, 1963, was estimated at 305,980.

There were 722 live births equal to a rate of 23.60 per 1,000 of population.

Deaths numbered 2,417, equal to a rate of 7.90 per 1,000 of population.

Deaths under one year numbered 146, equal to a rate of 20.22 per 1,000 live births.

Stillbirths totalled 88, equal to a rate of 0.29 per 1,000 of population and representing 1.20 per cent of all births (live and still).

The total number of communicable diseases notified during the year was 539 with 18 deaths.

In February, 1963, the Medical Officer of Health, South Coast Health District, took over the administration of Private Hospitals and Rest Homes in the area.

In 1963, a Sanitary Survey of the Municipality of Bega was carried out; while joint inspections were made by officers of the Department and the Public Works Department in connection with the fluoridation of Public Water Supplies at Bega, Bemboka, Bermagui, Cobargo and Braidwood.

During the year, the South Coast Health Office continued to sponsor the development of the Recovery Movement for the Mentally ill, and help was given to persons seeking advice for mentally retarded persons. A Committee was formed, during 1963, on which the Medical Officer of Health was invited to attend, to set up a counselling service on alcoholism and the Committee hopes to eventually establish a residential clinic in Wollongong.

School Medical Service—The number of school children fully examined and reviewed by Departmental Officers in the District numbered 11,070, while the Council school medical examination scheme fully examined and reviewed a further 11,941 children. Additionally, there were 1,056 parent interviews under both schemes. The Speech Therapy Clinic had total attendances of 1,192 children, while first interviews during the year numbered 74; and reviews totalled 77.

Tuberculosis Control—New cases of Tuberculosis discovered in 1963 numbered 66; while the total number of attendances at the Clinic was 8,068. Home visits numbered 1,332. Mantoux tests were carried out on 792 persons, and 125 B.C.G. vaccinations were given. The number of X-rays taken during the year in the District was 4,513.

Maternal and Baby Welfare—Total attendances at 51 Maternal and Baby Health Centres in the District, during 1963, was 79,634. Hospital visits numbered 472; while home visiting hours totalled 1,664.

Private Hospitals—Routine inspection of Private Hospitals and Rest Homes numbered 14; while six routine inspections of Training Schools and twelve inspections of District Hospital midwifery units were also undertaken during the year.

Western Health District

The population of the District at 30th June, 1963, was estimated at 276,000.

There were 6,708 live births equal to a rate of 24.30 per 1,000 of population.

Deaths numbered 2,576, equal to a rate of 9.33 per 1,000 of population.

Deaths under one year numbered 174, equal to a rate of 25.94 per 1,000 live births.

Stillbirths totalled 97, equal to a rate of 0.35 per 1,000 of population and representing 1.43 per cent of all births (live and still).

The total number of communicable diseases notified during the year was 337 with 12 deaths.

In February, 1963, the Medical Officer of Health, Western Health District, took over the administration of Private Hospitals and Rest Homes in the area.

Inspections of Aboriginal Stations and Reserves continued during the year, while inspections of Prisons and Child Welfare institutions were carried out.

In August 1963, the Municipality of Condobolin commenced fluoridation of its public water supplies and the fluoridation of supplies in Orange proceeded smoothly.

Environmental Hygiene inspections included the inspection of 1,259 septic tank and closet sites; the inspection of 31 sewerage treatment works and commercial sullage schemes; and the inspection of 188 and 200 garbage depots and noxious trade premises respectively.

School Medical Service—The number of children examined during 1963, in Primary and Secondary Schools, was 5,487; while 110 children were examined in Nursery Schools. Together there were 272 parent interviews.

Tuberculosis Control—New tuberculosis cases discovered totalled 18; while the total number of attendances at clinics was 5,725. Home visits numbered 2,077. Mantoux tests were carried out on 551 persons and 80 B.C.G. vaccinations were given.

Maternal and Baby Welfare—Attendances at the Baby Health Centres numbered 77,483; while 1,064 and 600 hospital and home visits were made respectively.

Pure Food Act—A total of 1,497 Pure Food inspections were carried out; 172 notices were served; and 81 prosecutions taken with £537 in fines and costs.

Private Hospitals and Rest Homes—During the year 11 Private Hospitals and 5 Rest Homes were inspected.

North Coast Health District

The population of the District at 30th June, 1963, was estimated at 154,470.

There were 3,316 live births, equal to a rate of 21.47 per 1,000 of population.

Deaths numbered 1,254, equal to a rate of 8.10 per 1,000 of population.

Deaths under one year numbered 69, equal to a rate of 20.81 per 1,000 live births.

Stillbirths totalled 49, equal to a rate of 0.32 per 1,000 of population and representing 1.46 per cent of all births (live and still).

The total number of communicable diseases notified during the year was 128 with 13 deaths.

Environmental hygiene inspection duties increased by 15 per cent during the year and included; 528 septic tank site inspections; 532 water supply examinations with sampling; particularly the Rocky Creek reticulation; while 70 sanitary depots were inspected.

Only one Council in the District resolved to adopt fluoridation of its water supply—the Municipality of Mullumbimby.

An inter-departmental Committee was set up, during the year, consisting of officers of the Department of Agriculture, North Coast Region, and the Department of Public Health, North Coast Health District, to consider the problems of the occupational exposure of staff to chemicals or organisms. Particular emphasis was laid on the use of organic phosphate by over 300 Board of Tick Control employees.

A Worm Infestation Survey was commenced in September 1963, among the North Coast aborigines, to determine the present day status of infestation with hookworm and *Ascaris* and to review current control measures. A drug is being used which is effective against hookworm and *Ascaris* infestation in contrast to "Entocyl" (piperazine adipate) which controls only ascariasis and which was used in the 1953-54 Survey. A summary of the Survey will be made in the Report for 1964.

School Medical Service—It was again possible in 1963 to cover the medical examination of the entire school population of the District. The overall defect rate was 30.4 per cent compared with 41.0 per cent in 1962.

Total schools visited numbered 228; and 16,293 pupils were examined. The percentage defects treated of those defects notified amounted to 57.8 per cent.

Pre-school Clinics and Child Health Clinics were commenced in the early part of the year at Lismore weekly and on alternate weeks at Casino and Murwillumbah. A total of 70 clinics were held in all when 638 children were medically examined.

Tuberculosis Control—From March to August 1963, the Anti-Tuberculosis Association of New South Wales was engaged in a mobile X-ray Survey of eligible residents in the North Coast Health District. A total of 91,550 or 82 per cent of the eligible population was X-rayed. Abnormalities detected included 23 active and 582 inactive cases of pulmonary tuberculosis and 1,081 non-tuberculous chest conditions, including nine cases of carcinoma of the lung.

Attendances at the chest clinics totalled 4,556.

Maternal and Baby Welfare—The Assistant Nurse Inspector arrived in the District in December 1963, and commenced initial inspections of the Baby Health Centres.

Pure Food Act—A total of 529 premises were inspected under the Pure Food Act; and 205 samples were taken resulting in 23 prosecutions. Food placed under seizure amounted to 8,000 lbs.

North Western Health District

The population of the District at 30th June, 1963, was estimated at 154,480.

There were 3,644 live births, equal to a rate of 23.59 per 1,000 of population.

Deaths numbered 1,233, equal to a rate of 7.98 per 1,000 of population.

Deaths under one year numbered 73, equal to a rate of 20.03 per 1,000 live births.

Stillbirths totalled 56, equal to a rate of 0.36 per 1,000 of population and representing 1.51 per cent of all births (live and still).

The total number of communicable diseases notified during the year was 129 with 13 deaths.

Sanitary Surveys were carried out in thirty towns and villages in the District to assess the work performed by or the need for health inspectors in these areas. Aboriginal stations and reserves were also re-inspected.

The possible harmful effects of the indiscriminate use of insecticides containing organic phosphate has had attention during the year.

There has been an improvement in sanitary facilities at schools and substantial progress has been made by the Department of Education in the conversion of pan closets to septic tank systems in these schools.

Environmental hygiene work carried out during the year included the inspection of 95 abattoirs, saleyards and poultry farms; the inspection of 149 dwellings and shops; the inspection and re-inspection of 170 noxious trade premises; and the inspection of 481 septic tank sites.

School Medical Service—From April 1963, a full-time School Medical officer commenced examinations of school children in the District when 49 schools were visited. The total number of school medical examinations and reviews carried out during this nine-month period in 1963, was 4,872, while 223 parent interviews were conducted. In addition, medical officers of the Shire Schemes visited 38 schools examining and reviewing 2,553 children and conducting 23 parent interviews.

A comprehensive dental survey of school children in Tamworth was conducted by a team from the School of Preventive Dentistry of the University of Sydney. This investigation antedated the fluoridation of Tamworth water supplies in November 1963. The results of this survey will be published in the Report for 1964.

Tuberculosis—The control of Tuberculosis was conducted from two main clinics and three sub-clinics in the District. Attendances totalled 3,055. There has been an increase of new cases due to the periodic visits of the mobile X-ray Units; greater interest by doctors; and more intensive follow-up work and investigation by the Tuberculosis clinic personnel.

Maternal and Baby Welfare—These services were decentralised in September 1963, when 18 Baby Health Centres were taken over. Attendances were good for the few months under review and home visiting proceeded satisfactorily.

Private Hospitals—Four Private Hospitals and two Rest Homes were inspected frequently during the year and all were found to be satisfactory in most respects.

Broken Hill Health District

The population at the 30th June, 1963, was estimated at 30,100.

There were 635 live births.

Deaths during the year totalled 1,254.

The number of communicable diseases notified was 21 with 1 death.

General work in the District included 80 examinations and interviews; 34 post mortem examinations; 45 attendances in Court; the examination of 24 arrested persons; 20 visits to gaols; and 151 Government medical examinations.

The examination of school children commenced in 1963, when 16 schools were visited and 1,600 school children were examined.

The number of patients X-rayed in the Tuberculosis Clinic was 428. An X-ray unit was installed, during the year, in the Broken Hill and District Hospital.

CLINICAL PATHOLOGY AND MEDICAL RESEARCH

The Institute of Clinical Pathology and Medical Research

Again an acceleration of the rate of growth in the amount of work carried out by almost every section of the Institute has occurred during 1963. The growing demand for laboratory investigations by medical practitioners in the State reflects not only the increasing complexity of modern medicine, but also a steady improvement in the quality of patient care.

During the year the number of investigations completed was Histopathology 28,060 (22,683); Chorionic Gonadotrophin Assay 379 (254); Haematology 21,180 (15,291); Biochemistry 23,886 (19,407); Bacteriology 38,121 (37,126); Virology 5,290 (4,418); and Exfoliative Cytology 37,876 (15,680). To complete these investigations no fewer than 154,413 (114,605) examinations were carried out. The figures in parenthesis are totals for 1962.

The number of post mortems carried out for the Lidcombe State Hospital increased from 227 in 1962 to 273 in 1963 and, during these examinations, the accumulation of museum specimens and the collection of a reference laboratory of histological sections for teaching purposes has proceeded satisfactorily.

In the bacteriological field drug sensitivity tests performed for *Mycobacterium tuberculosis* increased from 406 cultures in 1962 to 528 in 1963; while the demand for the Rose-Waaler test continued to increase and 787 sera were tested by this method compared with 521 sera in 1962.

In the Haematological field, the increased demand for haematological investigations resulted from an increase in acute admissions to Lidcombe State Hospital, where more major surgery was performed, with a concomitant demand for blood transfusions.

The Biochemistry Section continued protein-bound iodine determinations which increased four-fold during the year, together with serum iron and iron binding capacity determinations which increased almost three-fold. There were increases also in the determinations of serum calcium, protein, cholesterol and glutamic oxalacetic and pyruvic transaminase.

The increase in the virology section was, in part, due to a Q Fever Survey in abattoirs and in cattle slaughtered at Homebush and Newcastle. During the year, 148 viruses were isolated at the Institute. In 1963, the Institute accepted the responsibility of acting as a Reference Library for the Echo and Coxsackie A and B viruses.

The Department of Exfoliative Cytology, for the detection of uterine cancer, received a steady increase in the number of cervical smears. Of the 37,538 specimens received, 271 revealed cytological abnormalities, of which 102 were of a minor nature but 169 required further investigation by biopsy and 112 of these biopsies have already been carried out.

The training of Medical Graduates as Pathologists and Laboratory Assistants as Microbiologists was continued in 1963.

Research work in Biochemistry; Haematology; Bacteriology; Histopathology and Virology progressed during the year.

E. S. A. MEYERS,
Director of State Health Services.

VITAL STATISTICS

Vital Statistics of New South Wales for the year 1963

POPULATION

The estimated population at the end of 1963 was 4,086,293 of whom 2,052,339 were males and 2,033,954 females. During the year the increase in population by excess of births over deaths was 46,839 and by migration 22,819, making a total increase for the year of 69,658. The estimated mean population for the year 1963 was 4,050,987.

The natural increase in the population during 1962 was 48,578 and the increase by migration was 18,637, making a total increase during that year of 67,215.

LIVE BIRTHS

The total number of live births was 84,065 equivalent to 20.75 per 1,000 of mean population, which rate is 3.98 per cent below the average of the previous five years. Of this number 43,059 were males and 41,006 were females, the proportion being 105.01 males to 100 females.

In 1962 the number of live births was 85,439, equivalent to 21.46 per 1,000 of mean population.

Dividing the State into the Sydney Metropolitan Area and the Remainder of the State, there were in 1963, 43,298 births to mothers resident in the former and 40,767 in the latter, corresponding to rates of 19.18 and 14.41 respectively.

STILLBIRTHS

The number of stillbirths registered was 1,165 (618 males and 547 females) which is 1.37 per cent of all births, live and still, and equal to 0.29 per 1,000 of population. In 1962 the figure was 1,099, which was 1.27 per cent of all births live and still and was equal to 0.28 per 1,000 of the population.

In the Sydney Metropolitan Area there were 590 stillbirths in 1963, and in the Remainder of State 575, representing 1.21 and 1.39 per cent of all births, live and still, in the respective divisions.

DEATHS

The deaths during the year numbered 37,226 equivalent to a rate of 9.19 per 1,000 of population. This rate is 0.99 per cent above the average of the previous five years.

In 1962 there were 36,861 deaths, equivalent to a rate of 9.26 per 1,000 of mean population.

The total in 1963 includes 20,594 males and 16,632 females, equivalent to a rate of 10.12 and 8.25 respectively per 1,000 of mean population. The rate in the Sydney Metropolitan Area was 9.77 per 1,000 and in the Remainder of the State, 9.09.

Of the 37,226 people who died during the year, 1,987 were under 5 years of age; 12,194 were aged 5 to 64 years and 23,045 were 65 years and over. The rates per 1,000 of population in the groups under and over 5 years were 4.81 and 9.69 respectively.

Comment on some causes of death during 1963, with comparisons over the last five years, follows "Causes of Deaths".

INFANTILE MORTALITY

The number of children under one year of age who died was 1,673, equal to 19.90 per 1,000 live births. To this total the Sydney Metropolitan Area contributed 787 or 18.18 per 1,000 live births and the Remainder of the State 886 or 21.73 per 1,000 live births. The rate for 1963 is 7.23 per cent below the average of the previous five years. Of the deaths under 1 year of age, 1,071 or 64 per cent occurred under 1 week; 1,185 or 71 per cent under 1 month and 1,353 or 81 per cent under 3 months.

In 1962 the infantile mortality figure was 1,825, which was equivalent to a rate of 21.36 per 1,000 live births.

CAUSES OF DEATHS, 1963

(Classified in accordance with the Seventh Revision of the International List of Diseases and Causes of Death.)

The principal causes of death in 1963 are shown in the statements following Table I and reference is made below to the more prominent of these causes.

Infective and Parasitic Diseases (International Code Nos. 001-138)—Deaths in 1963 from infective and parasitic diseases numbered 315, representing a rate of 78 per million of mean population. Included in this section is Tuberculosis (Code Nos. 001-019), which was responsible for 185 of the deaths, equal to a rate of 46 per million of mean population. The deaths from tuberculosis comprised 169 from Tuberculosis of the Respiratory System (Code Nos. 001-008) and 16 from other forms of Tuberculosis (Code Nos. 010-019), the rates per million of mean population being 42 and 4 respectively. Of the persons dying from tuberculosis of the respiratory system 127 were males and 42 females, the rates per million of each sex being 62 and 21 respectively.

Malignant Neoplasms (Code Nos. 140-199) and Neoplasms of Lymphatic and Haematopoietic Tissue (Code Nos. 200-205)—Deaths from the above causes numbered 5,626 equal to a rate of 1,389 per million of mean population. The deaths of males numbered 3,061 and of females 2,565 per million of each sex being 1,504 and 1,272 respectively. Of the total deaths, malignant neoplasms caused 5,175 and neoplasms of lymphatic and haematopoietic tissue 451, the mortality rate being 1,277 and 111 per million respectively.

Vascular lesions Affecting Central Nervous System (Code Nos. 330-334)—In 1963, vascular lesions affecting the central nervous system caused 5,063 deaths, equal to a rate of 1,250 per million of mean population. Of the total 2,155 were males and 2,908 females corresponding respectively to rates of 1,059 and 1,442 per million of mean population.

Diseases of the Circulatory System (Code Nos. 400-468)—Diseases of the circulatory system were the cause of 15,867 deaths, the rate being 3,917 per million of mean population. Of the total, 9,031 were males and 6,836 females, corresponding respectively to rates of 4,438 and 3,391 per million of each sex.

Of the total deaths due to disease of the circulatory system, Rheumatic Fever and Chronic Rheumatic Heart Disease (Code Nos. 400-416) caused 267, equal to a rate of 66 per million.

Arteriosclerotic and Degenerative Heart Disease (Code Nos. 420-422) accounted for 12,248 deaths, the mortality rate being 3,023 per million of mean population, deaths of males from this cause numbering 7,321 and females 4,927, the corresponding rates being 3,598 and 2,444 per million of each sex.

Other diseases of the heart (Code Nos. 430-434) caused 1,304 deaths, equal to a rate of 322 per million.

Hypertensive Disease (Code Nos. 440-447) caused 984 deaths, the rate being 243 per million.

Deaths due to other diseases of the circulatory system numbered 1,064 equal to a rate of 263 per million.

Bronchitis (Code Nos. 500-502) and Pneumonia (Code Nos. 490-493)—In 1963 bronchitis was the cause of 783 deaths, comprised of 653 males and 130 females. Corresponding rate for males was 321, for females 64, and for persons 193 per million of mean population.

Of the 1,228 deaths from pneumonia, 729 were of males and 499 of females and respective rates were 303, 358 and 248 per million of mean population.

Nephritis and Nephrosis (Code Nos. 590-594)—During the year there were 965 deaths due to diseases of the Genito-urinary System (Code Nos. 590-637), of which 389 were caused by nephritis and nephrosis. The mortality rate for nephritis and nephrosis was 96 per million of mean population, for males 94 per million and for females 98 per million.

Mortality of Infants—Table XIII shows the number of deaths of children under 1 year of age and mortality rate per 1,000 live births for the principal causes of deaths.

ARTERIOSCLEROTIC AND DEGENERATIVE HEART DISEASE

Again it will be seen that in 1963 there was a continuing rise in deaths from the above diseases; the rates per million of mean population rose slightly also. There was a great preponderance of male deaths due to arteriosclerotic and degenerative heart disease compared with the female figures of deaths for these diseases.

TABLE I—DEATHS FROM ARTERIOSCLEROTIC AND DEGENERATIVE HEART DISEASE 1959-1963 (CODES 420-422)

Year					Number of Deaths			Rate per Million Mean Population		
					Males	Females	Persons	Males	Females	Persons
1959	..	..	..	..	6,416	4,123	10,539	3,389	2,206	2,801
1960	..	..	..	..	6,453	4,426	10,879	3,344	2,324	2,837
1961	..	..	..	..	6,626	4,401	11,027	3,361	2,261	2,816
1962	..	..	..	..	7,170	4,784	11,954	3,591	2,412	3,003
1963	..	..	..	..	7,321	4,927	12,248	3,598	2,444	3,023

VASCULAR LESIONS AFFECTING THE CENTRAL NERVOUS SYSTEM

The main diseases coming under this heading are Subarachnoid Haemorrhage, Cerebral Haemorrhage and Cerebral Thrombosis and Cerebral Embolism.

There was an increase of 124 persons dying from vascular lesions affecting the central nervous system over the 1962 figure; the rates have correspondingly increased. Approximately one-third more females die of these diseases than males which is most probably due to the greater longevity of the female.

TABLE II—DEATHS FROM VASCULAR LESIONS AFFECTING THE CENTRAL NERVOUS SYSTEM 1959-1963 (CODES 330-334)

Year					Number of Deaths			Rate per Million Mean Population		
					Males	Females	Persons	Males	Females	Persons
1959	...	..	..	..	2,092	2,705	4,797	1,105	1,447	1,275
1960	..	..	..	..	2,184	2,656	4,840	1,132	1,395	1,262
1961	..	..	..	..	2,100	2,703	4,803	1,065	1,390	1,227
1962	...	..	..	..	2,186	2,753	4,939	1,095	1,388	1,241
1963	...	..	..	..	2,155	2,908	5,063	1,059	1,442	1,250

NEOPLASMS—MALIGNANT AND OTHERWISE

The number of persons dying from the above diseases increased in all by 374 over the 1962 figure and there were 205 more female deaths, while male deaths increased by 169. The above deaths include malignant diseases of the lung, which have been further dissected in Table IV.

TABLE III—DEATHS FROM NEOPLASMS, MALIGNANT AND OTHERWISE, 1959-1963 (CODES 140-239)

Year					Number of Deaths			Rate per Million Mean Population		
					Males	Females	Persons	Males	Females	Persons
1959	..	..	..	..	2,709	2,345	5,054	1,431	1,255	1,343
1960	..	..	..	..	2,854	2,305	5,159	1,479	1,210	1,346
1961	..	..	..	..	2,865	2,465	5,331	1,454	1,268	1,362
1962	...	..	..	..	2,932	2,404	5,336	1,468	1,212	1,340
1963	...	..	..	..	3,101	2,609	5,710	1,524	1,294	1,410

MALIGNANT NEOPLASMS OF THE LUNG

There was an increase of 30 male deaths from malignant neoplasms of the lung; while female deaths also increased by 17 deaths during 1963.

TABLE IV—DEATHS FROM MALIGNANT NEOPLASMS OF THE LUNG (INCLUDING BRONCHUS TRACHEA AND PLEURA) 1959-1963 (CODES 162 AND 163)

Year					Number of Deaths			Rate per Million Mean Population		
					Males	Females	Persons	Males	Females	Persons
1959	..	..	..	..	544	85	629	287	45	167
1960	..	..	..	..	572	84	656	296	44	177
1961	..	..	..	..	626	94	720	318	48	184
1962	..	..	..	..	675	87	762	338	44	191
1963	..	..	..	..	705	104	809	346	52	200

RESPIRATORY DISEASE

During the year under review there has been a slight increase in the number of deaths from pneumonia while the rate has also risen slightly—Table V.

Deaths from bronchitis have decreased slightly as has the rate—Table VI.

TABLE V—DEATHS FROM PNEUMONIA, 1959-1963 (CODES 490-493)

Year					Number of Deaths			Rate per Million Mean Population		
					Males	Females	Persons	Males	Females	Persons
1959	..	..	..	..	894	667	1,561	472	357	415
1960	..	..	..	..	747	537	1,284	387	282	335
1961	..	..	..	..	589	481	1,070	299	247	273
1962	..	..	..	..	641	561	1,202	321	283	302
1963	..	..	..	..	729	499	1,228	358	248	303

TABLE VI—DEATHS FROM BRONCHITIS, 1959-1963 (CODES 500-502)

Year					Number of Deaths			Rate per Million Mean Population		
					Males	Females	Persons	Males	Females	Persons
1959	..	..	..	..	378	116	494	200	62	131
1960	..	..	..	..	452	107	559	234	56	146
1961	..	..	..	..	517	91	608	262	47	155
1962	..	..	..	..	664	140	804	333	71	202
1963	..	..	..	..	653	130	783	321	64	193

DEATHS FROM MOTOR VEHICLE AND OTHER ACCIDENTS

The total number of deaths from motor vehicle accidents decreased by 28 during 1963 while the rate also decreased.

There has also been a significant decrease in deaths from all other accidents particularly in regard to female deaths (see Table VIII).

TABLE VII—DEATHS FROM MOTOR VEHICLE ACCIDENTS, 1959-1963 (CODES E810-E835)

Year					Number of Deaths			Rate per Million Mean Population		
					Males	Females	Persons	Males	Females	Persons
1959	..	..	..	..	695	207	902	367	111	240
1960	..	..	..	..	742	256	998	385	134	260
1961	..	..	..	..	703	205	908	357	105	232
1962	..	..	..	..	708	234	942	355	118	237
1963	..	..	..	..	693	221	914	341	110	226

TABLE VIII—DEATHS FROM ALL OTHER ACCIDENTS, 1959-1963 (CODES E800-E802, E840-E962)

Year					Number of Deaths			Rate per Million Mean Population		
					Males	Females	Persons	Males	Females	Persons
1959	..	..	..	..	720	342	1,062	380	183	282
1960	..	..	..	..	704	390	1,094	365	205	285
1961	..	..	..	..	738	364	1,102	374	187	281
1962	..	..	..	..	679	432	1,129	349	218	284
1963	..	..	..	..	664	361	1,025	326	179	253

ACUTE ANTERIOR POLIOMYELITIS

The epidemic of poliomyelitis which subsided in 1962, showed no recurrence in 1963 when there were only three cases with no deaths.

TABLE IX—ACUTE ANTERIOR POLIOMYELITIS NOTIFICATIONS WITH DEATHS, 1959-1963

Year				Confirmed Cases	Deaths
1959	..	..	..	16	2
1960	..	..	..	9	2
1961	..	..	..	158	13
1962	..	..	..	218	12
1963	..	..	..	3	....

INFECTIOUS HEPATITIS

Infectious hepatitis notifications have again fallen appreciably during 1963. The Table below compares the figures in the State over the past five years.

TABLE X—INFECTIOUS HEPATITIS NOTIFICATIONS WITH DEATHS, 1959-1963

Year				Notifications	Deaths
1959	..	..	..	3,183	29
1960	..	..	..	4,925	20
1961	..	..	..	6,050	34
1962	..	..	..	3,202	20
1963	..	..	..	2,832	17

DIPHTHERIA

There has been an increase in the number of cases of diphtheria notified during 1963, and four deaths occurred.

TABLE XI—DIPHTHERIA NOTIFICATIONS WITH DEATHS, 1959-1963

Year				Notifications	Deaths
1959	..	..	..	14	3
1960	..	..	..	10	....
1961	..	..	..	19	1
1962	..	..	..	9	1
1963	..	..	..	39	4

TABLE XII—CAUSES OF DEATH, NEW SOUTH WALES, 1963

International Code No.	Cause of Death				Number of Deaths			Rate per Million of Mean Population		
					Males	Females	Persons	Males	Females	Persons
001-138	Infective and parasitic diseases .. .. .	..	..	..	201	114	315	99	57	78
001-008	Tuberculosis of respiratory system .. .. .	..	..	..	127	42	169	62	21	42
010	Tuberculosis of meninges and central nervous system .. .. .	..	..	..	1	3	4	...	1	1
011-019	Tuberculosis, other forms .. .. .	..	..	..	6	6	12	3	3	3
020-029	Syphilis and its sequelae .. .. .	..	..	..	15	5	20	7	2	5
040-041	Typhoid and para-typhoid fever .. .. .	..	..	..	....	....	....	....	....	....
045-048	Dysentery .. .. .	..	..	..	....	....	....	....	....	....
050	Scarlet Fever .. .. .	..	..	..	....	....	....	....	....	....
052	Erysipelas .. .. .	..	..	..	....	....	....	....	....	....
055	Diphtheria .. .. .	..	..	..	1	3	4	....	1	1
056	Whooping Cough .. .. .	..	..	..	....	....	....	....	....	....
057	Meningococcal infections .. .. .	..	..	..	5	4	9	2	2	2
061	Tetanus .. .. .	..	..	..	2	2	4	1	1	1
080	Acute poliomyelitis .. .. .	..	..	..	....	....	....	....	....	....
081	Late effects of acute poliomyelitis .. .. .	..	..	..	3	2	5	1	1	1
082	Acute infectious encephalitis .. .. .	..	..	..	7	7	14	3	3	3
083	Late effects of acute infectious encephalitis .. .. .	..	..	..	....	1	1	....	....	....
085	Measles .. .. .	..	..	..	2	7	9	1	3	2
092	Infectious hepatitis .. .. .	..	..	..	4	13	17	2	6	4
Residual	Other infective and parasitic diseases .. .. .	..	..	..	28	19	47	14	9	12

CAUSES OF DEATH, NEW SOUTH WALES, 1963—continued

International Code No.	Cause of Death	Number of Deaths			Rate per Million of Mean Population		
		Males	Females	Persons	Males	Females	Persons
140-239	Neoplasms	3,101	2,609	5,710	1,524	1,294	1,410
140-199	Malignant neoplasms	2,796	2,379	5,175	1,374	1,180	1,277
200-205	Neoplasms of lymphatic and haematopoietic tissue	265	186	451	130	92	111
210-239	Other neoplasms	40	44	84	20	22	21
240-289	Allergic, endocrine system, metabolic and nutritional diseases	302	457	759	148	227	187
260	Diabetes mellitus	191	324	515	94	161	127
280-286	Avitaminoses and nutritional deficiency states	13	12	25	6	6	6
Residual	Other allergic, endocrine system, metabolic and nutritional diseases	98	121	219	48	60	54
290-299	Diseases of the Blood and Blood Forming Organs	62	67	129	31	33	32
300-326	Mental, Psychoneurotic and Personality Disorders	81	55	136	40	27	34
330-398	Diseases of the Nervous System and Sense Organs	2,333	3,087	5,420	1,147	1,531	1,338
	Vascular lesions affecting central nervous system—						
331	Cerebral haemorrhage	932	1,151	2,083	458	571	514
332	Cerebral embolism and thrombosis	916	1,344	2,260	450	667	558
330, 333, 334	Other	307	413	720	151	205	178
340	Meningitis, except meningococcal and tuberculous	12	14	26	6	7	6
343	Encephalitis, myelitis and encephalomyelitis (except acute infectious)	4	1	5	2	....	1
341-342, 344-398	Other disorders of the nervous system and sense organs	162	164	326	80	81	80
400-468	Diseases of the Circulatory System	9,031	6,836	15,867	4,438	3,391	3,917
400-416	Rheumatic fever and chronic rheumatic heart disease	111	156	267	55	77	66
420-422	Arteriosclerotic and degenerative heart disease	7,321	4,927	12,248	3,598	2,444	3,023
430-434	Other diseases of the heart	640	664	1,304	315	329	322
440-447	Hypertensive disease	416	568	984	204	282	243
450-456	Diseases of arteries	484	482	966	238	239	238
460-468	Diseases of veins and other diseases of circulatory system	59	39	98	29	19	24
470-527	Diseases of the Respiratory System	1,562	734	2,296	768	364	567
480-483	Influenza	11	19	30	5	9	7
490-493	Pneumonia	729	499	1,228	358	248	303
500-502	Bronchitis	653	130	783	321	64	193
470-475, 510-527	Other diseases of the respiratory system	169	86	255	83	43	63
530-587	Diseases of the Digestive System	594	434	1,028	292	215	254
540-545	Diseases of stomach and duodenum	174	77	251	86	38	62
550-553	Appendicitis	30	9	39	15	4	10
560-561	Hernia of the abdominal cavity	33	22	55	16	11	14
570	Intestinal obstruction without mention of Hernia	53	63	116	26	31	29
571	Gastro-enteritis and colitis except ulcerative, age four weeks and over	46	39	85	23	19	21
572	Chronic enteritis and ulcerative colitis	28	43	71	14	21	18
576-577	Peritonitis and peritoneal adhesions	2	3	5	1	1	1
581	Cirrhosis of liver	130	60	190	64	30	47
Residual	Other diseases of digestive system	98	118	216	48	59	53
590-637	Diseases of Genito-Urinary System	515	450	965	253	223	238
590-594	Nephritis and nephrosis	192	197	389	94	98	96
610-612	Diseases of the prostate	136	....	136	67	....	34
600-609, 613-637	Other diseases of the genito-urinary system	187	253	440	92	125	109
640-689	Deliveries and Complications of Pregnancy, Child-birth and Puerperium .. .. .	....	27	27	....	13	7
640-649	Complications of Pregnancy .. .. .	....	8	8	....	4	2
650-652	Abortion—						
6502, 6512, 6522	Criminal .. .. .	....	1	1	....	....	....
Residual	Other .. .. .	....	2	2	....	1	....
670-678	Complications of delivery .. .. .	....	8	8	....	4	2
680-689	Complications of puerperium .. .. .	....	8	8	....	4	2
690-716	Diseases of the Skin and Cellular Tissue	17	26	43	8	13	11
720-749	Diseases of the Bones and Organs of Movement	46	75	121	23	37	30
750-759	Congenital Malformations	243	189	432	119	94	107
760-776	Certain Diseases of Early Infancy	550	432	982	270	214	242
760-761	Injury at Birth	152	115	267	75	57	66
762	Post-natal asphyxia and atelectasis	79	49	128	39	24	32
776	Immaturity unqualified	190	158	348	93	78	86
763-775	Other diseases of early infancy	129	110	239	63	55	59
780-795	Symptoms, Senility and Ill-defined Conditions	114	147	261	56	73	64
794	Senility without mention of psychosis	86	128	214	42	63	53
780-793, 795	Other symptoms and ill-defined conditions	28	19	47	14	9	12
E800-E999	Accidents, Poisonings and Violence	1,842	893	2,735	905	443	675
E800-E962	Accidents	1,357	582	1,939	667	289	479
E970-E979, E963	Suicide and self inflicted injury	445	283	728	219	140	180
E964, E965, E980-E999	Homicide and operations of war	40	28	68	20	14	17
001-E999	All Causes	20,594	16,632	37,226	10,121	8,249	9,189

TABLE XIII
CAUSES OF DEATH OF INFANTS UNDER ONE YEAR OF AGE, NEW SOUTH WALES, 1963

International Code No.	Cause of Death	Number of Deaths			Rate per 1,000 Live Births		
		Males	Females	Persons	Males	Females	Persons
001-019	Tuberculosis .. .. .	....	....	....	....	....	....
020-029	Syphilis and its sequelae	1	....	1	·02	....	·01
057	Meningococcal infections	2	4	6	·05	·10	·07
080-081	Poliomyelitis .. .. .	....	....	....	....	....	....
082-083	Infection encephalitis	2	3	5	·05	·07	·06
030-056, 058-074, 084-138.	Other infective and parasitic diseases	5	10	15	·12	·24	·18
340	Meningitis, except meningococcal and tuberculous ..	4	5	9	·09	·12	·11
490-493	Pneumonia (age 4 weeks and over)	85	52	137	1·97	1·27	1·63
500-502	Bronchitis	7	7	14	·16	·17	·17
571	Gastro-enteritis and colitis, except ulcerative, age 4 weeks and over	18	9	27	·42	·22	·32
750-759	Congenital malformations	182	141	323	4·23	3·44	3·84
7600, 7610 ..	Injury at birth without mention of immaturity ..	82	56	138	1·90	1·37	1·64
7605, 7615 ..	Injury at birth, with immaturity	70	59	129	1·63	1·44	1·53
7620	Post-natal asphyxia and atelectasis, without mention of immaturity	30	26	56	·70	·63	·67
7625	Post-natal asphyxia and atelectasis, with immaturity ..	49	23	72	1·14	·56	·86
7630	Pneumonia of newborn, without mention of immaturity	11	14	25	·26	·34	·30
7635	Pneumonia of newborn, with immaturity	1	8	9	·02	·20	·11
7640	Diarrhoea of newborn, without mention of immaturity ..	....	1	1	....	·02	·01
7645	Diarrhoea of newborn, with immaturity .. .. .	....	....	....	....	....	....
7650, 7660, 7670, 7680, 7690-7694, 7700-7702, 7710, 7720, 7730.	Other diseases of early infancy, without mention of immaturity	45	50	95	1·05	1·22	1·13
7655, 7665, 7675, 7685, 7695-7699, 7705-7707, 7715, 7725, 7735.	Other diseases of early infancy, with immaturity ..	70	35	105	1·63	·85	1·25
774	Immaturity with mention of any other subsidiary condition	2	2	4	·05	·05	·05
776	Immaturity unqualified	190	158	348	4·41	3·85	4·14
E800-E999 ..	Accidents, poisonings and violence	40	31	71	·93	·76	·84
Residual	All other Causes	36	47	83	·84	1·15	·99
001-E999.. ..	All Causes	932	741	1,673	21·64	18·07	19·90

COMMUNICABLE DISEASES

Division of Epidemiology—Annual Report, 1963

STAFF

(as at 31st December, 1963)

Director: DR. H. C. JOHNSTON, M.B., B.S., D.P.H.

Two Senior Medical Officers; two Medical Officers; one Microbiologist; one Laboratory Assistant (one in training); two Laboratory Attendants; one Senior Clinic Attendant; one Deputy Senior Clinic Attendant; six Clinical Attendants; one Senior Clerk; three Clerks; and three other Office Staff.

NOTIFIABLE INFECTIOUS DISEASES RECORDED IN NEW SOUTH WALES DURING THE YEARS 1962 AND 1963 UNDER PUBLIC HEALTH ACT, 1902-1952

The Public Health Act, 1902-1952, provides that the Governor may by proclamation in the Government Gazette, declare that any disease named therein is an infectious disease.

TABLE I

Disease	Notifiable from—	Cases and Deaths Notified			
		1962		1963	
		Cases	Deaths	Cases	Deaths
Smallpox	20th December, 1881 .. .. .	..	..	..	..
Leprosy	26th November, 1890	2	..	5	..
Typhoid and	} 1st January, 1898 }	7	..	9	..
Paratyphoid fevers		2	..	6	..
Scarlet fever	1st January, 1898	318	1	349	..
Diphtheria or membranous croup	1st January, 1898	9	1	39	4
Plague	23rd January, 1900* .. .. .	..	..	..	..
Acute anterior poliomyelitis	1st February, 1912†	218	12	3	..
Meningococcal infection	1st October, 1915*	46	17	44	9
Virus encephalitis	1st April, 1926*	39	14	47	14
Cholera	12th August, 1927 .. .. .	..	..	..	..
Typhus fever	12th August, 1927 .. .. .	..	..	..	..
Yellow fever	12th August, 1927 .. .. .	..	..	..	..
Puerperal infection	16th August, 1929*	44	5	48	3
Brucellosis	13th August, 1937*	12	..	11	..
Tuberculosis (all forms)	14th May, 1945‡	1,460	218	1,375	185
Infantile diarrhoea	11th July, 1952	121	25	354	39
Rheumatic fever	11th July, 1952	33	13	39	9
Chorea (rheumatic)	11th July, 1952	1	..	1	1
Ancylostomiasis	11th July, 1952	12	..	39	..
Dengue fever	11th July, 1952	10	..	..	..
Ornithosis	11th July, 1952	3	..	2	..
Leptospirosis	11th July, 1952	19	..	13	..
Ascariasis	22nd January, 1954	42	1	67	..
Infectious hepatitis	22nd January, 1954	3,202	20	2,832	17
Staphylococcal mastitis	19th September, 1958	2	..	3	..
Staphylococcal pneumonia	19th September, 1958	47	37	47	34
Staphylococcal diseases in infants under four weeks of age	18th September, 1958	504	2	679	1
Totals .. .. .	.. .. .	6,153	366	6,012	316
Population as at 30th June .. .. .	.. .. .	3,976,736		4,086,293	

*Definition reproclaimed 11th July, 1952.

†Definition reproclaimed 14th August, 1931 and 11th July, 1952. Cases and deaths are those notified during the year.

‡Pulmonary tuberculosis has been notifiable as follows: (a) from 1904, City of Sydney only; (b) from 1915, Metropolitan and Hunter River Districts; (c) from 1916, Blue Mountains Districts added; (d) from March, 1929, notification was extended to cover the whole State. On 14th May, 1945, extra-pulmonary tuberculosis was made notifiable.

Note—Diseases notifiable prior to 1902 were notifiable under the following Act; Infectious Diseases (Smallpox) Supervision Act, 1881; Leprosy Act, 1890; Public Health Act, 1896.

GENERAL

There were 6,012 cases of communicable diseases notified during 1963 with 316 deaths; both figures showing a reduction on the figures for 1962, which were 6,153 and 366 respectively. Decreases in notifications over the figure for last year occurred particularly in relation to acute anterior poliomyelitis (—215); infectious hepatitis (—470); and tuberculosis (—95); while the fall in the figures for deaths occurred mainly in tuberculosis (—33); and acute anterior poliomyelitis (—12); rises in notifications occurred in diphtheria (+30); and infantile diarrhoea (+233); while rises of consequence in death figures occurred mainly in infantile diarrhoea (+14), and diphtheria (+3).

POLIOMYELITIS

The epidemic of poliomyelitis which occurred in 1961-62 abated in 1963 when only three cases of this disease occurred with no deaths.

INFECTIOUS HEPATITIS

Again, during 1963, there was a decrease in notifications of infectious hepatitis amounting to 470 although the death figures remained almost constant at 17 (20 in 1962).

DIPHTHERIA

There was an upsurge of diphtheria during 1963, when 39 notifications of the disease were made and four deaths occurred. The timely institution of warnings in regard to immunization, and immunization programmes, cut short what might have become an epidemic in the State.

STAPHYLOCOCCAL PNEUMONIA

There were 47 notifications of staphylococcal pneumonia with 34 deaths compared with 47 notifications and 37 deaths in 1962.

TUBERCULOSIS (ALL FORMS)

There were 1,375 cases of tuberculosis (all forms) notified in 1963 of which 1,039 were active cases of pulmonary tuberculosis. Deaths recorded numbered 185 (all forms) of which 156 were due to pulmonary tuberculosis.

TABLE III—SUMMARY OF NOTIFIABLE DISEASES.—CASES AND DEATHS BY HEALTH DISTRICTS, NEW SOUTH WALES—1963

Districts	Estimated Population 30th June, 1963	Ancylostomiasis		Ascariasis		Brucellosis		Chorea (Rheumatic)		Diphtheria		Infantile Diarrhoea		Virus Encephalitis		Infectious Hepatitis	
		C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
Metropolitan Health District	2,382,460	2	..	3	..	8	..	1	..	27	2	244	18	33	8	1,921	12
Newcastle Health District	483,400	20	..	45	..	..	..	..	..	11	1	25	1	..	..	158	2
South Coast Health District	305,980	..	..	..	..	..	..	..	..	..	..	13	1	..	..	239	1
North Coast Health District	154,470	16	..	15	..	..	..	..	..	..	..	9	2	..	..	24	1
Western Health District	276,000	..	..	..	..	..	..	..	..	..	..	33	10	3	1	188	..
North Western Health District	154,480	..	..	3	..	1	..	..	..	..	..	10	5	4	2	67	..
Broken Hill Health District	30,100	..	..	..	..	..	..	..	..	..	..	1	1	..	..	9	..
Remainder of State ..	261,708	1	..	1	..	..	..	..	..	1	1	19	1	1	1	223	1
Residence outside of State ..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Armed Forces ..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..
Total New South Wales ..	4,048,598	39	Nil	67	Nil	11	Nil	1	Nil	39	4	354	39	47	14	2,832	17

		Typhoid Fever		Paratyphoid Fever		Rheumatic Fever		Scarlet Fever		Puerperal Fever		Ornithosis		Leptospirosis		Meningococcal Infection	
		C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
Metropolitan Health District	2,382,460	6	..	5	..	18	5	234	..	22	1	2	..	1	..	26	7
Newcastle Health District	483,400	1	..	..	..	10	1	33	..	..	..	..	..	7	..	6	1
South Coast Health District	305,980	..	..	..	..	5	1	..	..	6	1	..	..	..	..	3	..
North Coast Health District	154,470	..	..	..	..	1	1	..	..	5	..	..	..	..	..	2	..
Western Health District	276,000	..	..	1	..	1	1	48	..	6	1	..	..	..	..	3	1
North Western Health District	154,480	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..
Broken Hill Health District	30,100	..	..	..	..	..	..	34	..	9	..	..	..	..	..	..	..
Remainder of State ..	261,708	2	..	..	..	4	..	..	..	..	..	..	..	..	..	3	..
Residence outside of State ..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Armed Forces ..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total New South Wales ..	4,048,598	9	Nil	6	Nil	39	9	349	Nil	48	3	2	Nil	13	Nil	44	9

		Typhus Fever		Poliomyelitis		Dengue Fever		Tuberculosis		Leprosy		Staphylococcal Mastitis		Staphylococcal Pneumonia		Staph. diseases in Infants under 4 weeks of age	
		C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.	C.	D.
Metropolitan Health District	2,382,460	..	..	2	..	..	..	836	116	5	..	1	..	24	20	472*	..
Newcastle Health District	483,400	..	..	..	..	..	..	69	32	..	..	2	..	11	3	19	..
South Coast Health District	305,980	..	..	..	..	..	..	143	12	..	..	..	..	1	1	126*	1
North Coast Health District	154,470	..	..	..	..	..	..	41	6	..	..	..	..	1	1	4	..
Western Health District	276,000	..	..	1	..	..	..	49	9	..	..	..	..	3	3	..	..
North Western Health District	154,480	..	..	..	..	..	..	41	4	..	..	..	..	2	2	..	..
Broken Hill Health District	30,100	..	..	..	..	..	..	11	1	..	..	..	..	..	..	..	..
Remainder of State ..	261,708	..	..	..	..	..	..	42	5	..	..	..	..	4	4	58*	..
Residence outside of State ..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Armed Forces ..	....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total New South Wales ..	4,048,598	Nil	Nil	3	Nil	Nil	Nil	1,232	185	5	Nil	3	Nil	47	34	679	1

* Includes cases—Ages and Sex not stated.

VENEREAL DISEASES

GENERAL

The Venereal Diseases Act, 1918, was amended by Parliament in September, 1963, and the new Act, the Venereal Diseases Act, 1918-1963, with new and revised regulations will come into force on a date to be proclaimed next year. A summary of the new provisions will be given in the annual report for 1964.

There was a decrease in the total of V.D. notifications during the year; this was due to a fall in the number of males notified, the total of notifications in females rising to 749 compared with 571 in 1962. There were increases in the number of notifications received from most of the extra-metropolitan Health Districts and the proportion of cases notified by private practitioners also rose slightly. Full statistics are shown in the section of this report dealing with the administration of the Venereal Diseases Act during the year.

DIVISIONAL CLINIC

This clinic is for males only and in 1963 of all the reported cases in males for the whole State 51 per cent of the gonorrhoea cases and 42.6 per cent of the syphilis cases were treated in the clinic.

Six thousand one hundred and seventy eight patients presented themselves at the clinic for examination and diagnosis during the year; of these, 1,875 (30.3 per cent) were found to be suffering from notifiable venereal diseases.

The numbers of cases of non-gonococceal urethritis (which is not notifiable) treated in the clinic are shown for three years:—

					1961	1962	1963
No. of Cases							
(N.G.U.)	..	..	..	..	1,475	1,743	1,493

SEROLOGICAL LABORATORY

During the year, Dr. M. Garner, Senior Medical Officer, spent some months working in laboratories in England, Denmark, Holland and the U.S.A., studying new serological techniques, particularly the Treponema Pallidum Immobilisation Test and fluorescent antibody techniques.

During the year there was a decrease in the number of tests performed in the laboratory despite a rise in the number of specimens received:—

					1962	1963
No. of Specimens received					27,653	30,613
No. of Tests Performed					104,118	102,853

VENEREAL DISEASES ACT, 1918

NOTIFICATIONS

Four thousand two hundred and thirty five notifications of venereal diseases were received during the year. A further 78 cases, diagnosed in the Division but not notified subsequently, have been added to the total, making this 4,313 for the year.

- Table 1: shows the cases of syphilis and gonorrhoea by Health Districts and source of report.
- Table 2: shows age and sex distribution of all venereal diseases for the year.
- Table 3: shows the age—sex grouping of syphilis cases by stage of disease.

GONORRHOEA

Three thousand six hundred and twenty five cases were recorded, a decrease of 3 per cent under the total for 1962.

Three thousand and twenty four cases (83.5 per cent) were from the Metropolitan Health District. The proportion of cases notified by private practitioners was 23.3 per cent.

The notification rates for gonorrhoea in 1963 were:—

Whole State: 89.3 per 100,000 mean population.

Metropolitan Health District: 126.9 per 100,000 mean population.

Both these rates were lower than those in 1962 which were 93.9 and 160.3 respectively. The sex ratio of cases was 5.3 males to 1 female.

The proportions of cases occurring in the age group 15 to 19 years increased in both sexes compared with those of the previous year.

			1962	1963
Percentage of cases in age group 15-19.	Males	.. ..	19.8 per cent	22.8 per cent
	Females	.. ..	42.1 per cent	44.8 per cent

SYPHILIS

Four hundred and ninety nine cases were recorded of which 340 (68.1 per cent) were in an early infectious stage. The total for the year was 52 more than that for 1962, an increase of 11.6 per cent.

Three hundred and fifty one (70.4 per cent) of the cases were from the metropolitan area. The proportion of the total notified by private practitioners was 15.8 per cent.

Notification rates per 100,000 mean population for syphilis for the years 1962 and 1963 were:—

								1962	1963
Whole State	..	..	..	..	..	..	..	11.2	12.3
Metropolitan Health District	..	..	..	..	..	..	..	19.2	14.7

The sex ratio of syphilis cases was 1.8 males to 1 female.

The proportion of cases in the 15-19 age group were:—

								1962	1963
Males	..	..	..	..	..	..	..	6 per cent	5.2 per cent
Females	..	..	..	..	..	..	..	19 per cent	20.6 per cent

NOTIFICATION OF DEFAULT

The total of defaulters reported was 1,075 for the year compared with 1,474 in 1962. Of these 488 remained in default—33.1 per cent compared with 35.4 per cent, in 1962.

PROSECUTIONS

For the first time since the Act came into force on 1st December, 1920, a prosecution was approved under Section 21 (Knowingly infecting with venereal disease). The accused, a male, pleaded guilty and was sentenced to 9 months hard labour.

Summonses for breach of Section 5 (Failure to continue treatment) were issued against 642 persons compared with 746 in 1962.

Two males were arrested, one was fined £15 for failure to honour his undertaking to resume treatment and the other completed treatment after being placed on verbal recognisance.

TABLE 1
(Figures for 1962 are shown in brackets)

Source of Report	Gonorrhoea		Syphilis	
	Male	Female	Male	Female
Navy	111 (117)	....	13 (14)	....
Army	95 (93)	....	4 (4)	....
Air Force	1 (6)	....	....	....
Metropolitan H.D.— Private Practitioners	592 (594)	112 (129)	41 (42)	14 (16)
Hospitals	345 (377)	418 (299)	46 (73)	112 (73)
Divisional Clinic	1,557 (1,837)	—	138 (145)	....
Newcastle H.D.— Private Practitioners	31 (8)	8 (5)	1 (3)	— (—)
Hospitals	158 (129)	17 (9)	12 (6)	5 (3)
South Coast H.D.— Private Practitioners	22 (19)	— (1)	14 (—)	1 (—)
Hospitals	17 (22)	1 (—)	5 (—)	1 (—)
North Coast H.D.— Private Practitioners	14 (14)	2 (2)	1 (—)	— (—)
Hospitals	5 (5)	1 (—)	— (—)	— (—)
North Western H.D.— Private Practitioners	6 (—)	1 (—)	— (—)	— (—)
Hospitals	4 (1)	— (1)	— (—)	— (—)
Western H.D.— Private Practitioners	62 (34)	8 (2)	5 (1)	4 (1)
Hospitals	7 (13)	3 (—)	3 (—)	7 (—)
Remainder of State	15 (7)	2 (1)	— (—)	3 (—)
Hospitals	4 (1)	— (—)	— (—)	— (—)
Diagnosed in Division but not notified	9 (9)	— (3)	41 (43)	28 (22)
Total	3,052 (3,284)	573 (452)	324 (331)	175 (116)

TABLE 2
Cases of venereal disease notified during 1963 by disease, age and sex

	0-14		15-19		20-24		25-29		30-39		40-49		50-59		60-69		70 and over		Age not stated		Totals		Grand Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Gonorrhoea	2	37*	697	257	1,096	145	589	66	433	42	176	20	46	3	6	1	2	..	5	2	3,052	573	3,625
Syphilis	1	6	17	36	69	30	54	23	85	28	51	24	23	16	13	4	6	1	5	7	324	175	499
Chancroid .. ..	..	..	..	..	1	..	1	..	..	..	2	..	..	..	..	..	..	..	..	..	4	..	4
Lymphogranuloma venereum .. ..	..	..	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2
Gleet .. ..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	2	..	2
Venereal Warts ... ..	..	..	16	..	72	..	44	..	26	..	11	..	4	..	3	..	..	..	..	..	176	..	176
Gonorrhoeal ophthalmia	4	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	1	5
Totals	7	44	730	293	1,240	175	689	89	545	70	240	44	73	19	22	5	8	1	10	9	3,564	749	4,313

* In this total 24 girls were aged 14 and 5 girls were 13 years old. 8 cases of gonococcal vulvo-vaginitis were reported:—

- 2 aged 10 years
- 1 aged 8 years
- 1 aged 6 years
- 1 aged 5 years
- 2 aged 4 years
- 1 aged 4 months

TABLE 3
SYPHILIS: Age—Sex grouping by stage of disease

	0-14		15-19		20-24		25-29		30-39		40-49		50-59		60-69		70 and over		Not stated		Totals		Grand Totals
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Primary .. ..	..	1	12	9	46	10	37	7	60	3	28	2	14	2	5	..	..	..	2	1	204	35	239
Secondary .. ..	..	1	3	7	7	4	9	8	10	10	3	8	4	4	1	1	1	..	1	1	39	44	83
Latent—1st Year ..	..	..	2	1	5	2	1	1	4	..	2	..	..	..	..	..	..	..	..	..	14	4	18
Cardiovascular ..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1	2	..	..	..	4	1	5
C.N.S. .. ..	..	..	..	..	..	..	..	..	2	2	5	5	3	6	5	..	2	1	1	..	18	14	32
All other Late and Latent ..	..	1	..	19	11	14	7	7	9	13	13	9	1	4	1	2	1	..	1	5	44	74	118
Congenital under 1 Year of age	1	3	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	3	4
Totals	1	6	17	36	69	30	54	23	85	28	51	24	23	16	13	4	6	1	5	7	324	175	499

Tuberculosis Division—Annual Report, 1963

STAFF

(as at 31st December, 1963)

Director: DR. KEITH W. H. HARRIS, M.B., B.S., D.P.H., F.C.C.P.

Deputy Director: DR. V. G. S. DESGRAND, M.B., B.S.

3 Medical Officers, 33 Nurses, 16 Clerical Officers, 26 Operator/Receptionists, 4 Radiographers, 1 Survey Manager, 1 Operator/Receptionist/Lorry Driver, 1 X-ray Technician, 2 Dark Room Attendants, 1 Motor Lorry Driver, 2 Messengers.

GENERAL

During the year several outstanding changes took place, including the implementation of Compulsory X-rays during miniature mass X-ray surveys; action by the Repatriation Department relating to the recalcitrant tuberculous patients; transfer of Epidemiological Surveys to the School Medical Service; Commonwealth Minister for Health's Conference dealing with the unification of nation wide tuberculosis programmes; the use of new statistics for tuberculosis as recommended by the National Tuberculosis Advisory Council; and the operation of 70 mm. X-ray machines in Psychiatric and General Hospitals. These aspects will be covered under the relevant sections of this report.

For the first three months of the year the work of the Chest X-ray Centre had to be carried out without a Senior Radiographer. This created considerable difficulties in training new X-ray operators.

Approximately for four months of the year the X-ray section was without the services of an X-ray technician. Because of this considerable difficulty was experienced in maintaining the X-ray equipment in the caravans. Adequate routine maintenance could not be carried out, while breakdowns were more frequent and the quality of the films deteriorated from time to time.

In previous reports the percentage attendance of the eligible population in any given area has been calculated on a flat rate of 70 per cent of the population being over 14 years of age and eligible to attend the surveys. However, investigations have shown a considerable variation from the newer, rapidly growing suburbs, to the older long established suburbs. In the Metropolitan area the approximate figures were 61 per cent and 85 per cent respectively. In the light of this information more accurate estimates of attendances can now be made.

The main Metropolitan areas surveyed were the Northern Suburbs from Hornsby to Warringah and here the percentage attendances increased from less than 50 per cent to 67.4 per cent. In addition to this a City of Sydney Survey was being carried out concurrently by the Anti-Tuberculosis Association and a significant number of residents of the Northern Suburbs attended these units. This has been shown by the fact that 11 persons resident in these areas have been notified as suffering from active tuberculosis as a result of the City Survey.

The number of active cases notified during the previous surveys in the Northern Suburbs in 1959-60 was 56. When the final results from all the suspect active cases have been obtained and including the eleven from the City of Sydney Survey, the number of active cases found during the 1963 surveys will be between 90-100.

Attendances in Country Surveys were much the same as in the previous round and it would appear that the present publicity in this connection has had little effect. However, until an analysis of the recent and future compulsory Country Surveys has been made the exact significance of the present attendance figures is hard to assess.

Since the inception of the community wide miniature X-ray surveys in 1952, a total of over 7½ million X-rays have been taken by this Division and the Anti-Tuberculosis Association of New South Wales. From these films about 5,000 cases of active tuberculosis have been discovered.

RADIOLOGICAL SURVEYS

This is considered in two parts. The first part deals with the Surveys carried out by the Tuberculosis Division and the second part deals with Surveys carried out by the Anti-Tuberculosis Association.

RADIOLOGICAL SURVEYS BY DIVISION OF TUBERCULOSIS

These Surveys will be considered under three headings; (A) Mass Miniature Surveys; (B) Special Surveys; and (C) X-rays taken at the Chest Centre. Statistics relevant to these are contained in Tables I to VII.

(A) MASS MINIATURE SURVEYS

The areas surveyed during 1963 under the compulsory scheme were:—

(i) *Second Round Surveys:*

Municipality of Bombala, Shire of Bibbenluke.

(ii) *Third Round Surveys:*

Shire of Shoalhaven, Shire of Eurobodalla, Shire of Mumbulla, Shire of Imlay, Shire of Snowy River, Shire of Monaro, Shire of Yarrawluma, Shire of Wingecarribee, Shire of Mittagong, Shire of Wollondilly, Shire of Cudgegong, Shire of Rylstone, Shire of Coolah (part only), Shire of Molong, Shire of Lyndhurst, Municipality of Bega, Municipality of Cooma, Municipality of Queanbeyan, Municipality of Bowral, Municipality of Camden, Municipality of Campbelltown, Municipality of Mudgee.

(iii) *Fourth Round Surveys:*

Shire of Blaxland, Shire of Colo, Shire of Hornsby, Shire of Warringah, Municipality of Lithgow, Municipality of Penrith, Municipality of Windsor, Municipality of Ku-ring-gai, Municipality of Willoughby, Municipality of Manly, Municipality of Mosman, Municipality of Lane Cove.

(iv) *Fifth Round Surveys:*

Municipality of North Sydney.

The total number of persons X-rayed during the above Mass Miniature Surveys was 346,476 which was an increase of 70,147 over the 1962 figures. (See Tables I, III and IV). To carry out these X-rays four 70 mm. units in caravans were used full time; and limited use was made of a unit in a closed truck which unit was predominantly used for taking large films.

The number of active cases of tuberculosis discovered as a result of these surveys was 108 which gave a case rate of 3.14 per 10,000 micro films taken. Among the 264 persons still under investigation at the end of the year there were a further 36 cases whose X-ray films indicated that they might have active tuberculosis.

As a result of further investigations of cases referred from the M.M.R. Surveys in 1962, a further 38 cases of active tuberculosis were notified. This brings the total number of cases for that year to 144 representing 5.21 per 10,000 micro films taken.

A list is given in Table II of a variety of conditions, other than tuberculosis, found among those persons recalled for X-ray with large films. This list is by no means complete as a final diagnosis has not been received in quite a number of cases.

Following the procedure of previous years all films reported on as abnormal were scrutinized and only when these were considered significant, or where a large film was really felt necessary were patients recalled. This has resulted in the number of large films being reduced to about one-third of the number used three years ago. In previous years more than half of the number of persons recalled were found to have normal large films. With the excellent quality of 70 mm. films now available it is possible to issue many more reports of minor abnormalities to the medical adviser of the person concerned, without the necessity for recall for a large film.

A new 70 mm. X-ray unit was put into service at the beginning of 1963. This unit has not been completely satisfactory as it gave continual trouble for many months. This resulted in a significant number of technical faults in the films. However, it now appears to be working satisfactorily.

An old caravan was converted for use as an interviewing room of those persons recalled for large films (particularly in the Metropolitan area). This greatly facilitated the recall of patients as they could be given an indication of the nature of the abnormality within a few minutes of having a film taken and this has been considerably appreciated by the persons recalled.

B. SPECIAL SURVEYS (See Tables I, VI and VII)

A number of special surveys were conducted during the year. These included gaols at Parramatta, Bathurst, Goulburn, Berrima and prison farms at Emu Plains and Kirkconnell. Surveys were conducted at the University of Sydney and various Navy, Army and R.A.A.F. installations. A number of homes for the aged were visited and several factories, some for examination of contacts of notified cases of tuberculosis.

The total number X-rayed was 12,726 and the relevant statistics are found in Tables I and VI.

Surveys of Psychiatric Hospitals (see Table VII) were conducted at the following places: Kenmore, Broughton Hall, Callan Park, Gladesville, Rydalmere and Parramatta. The total number X-rayed was 6,257 which figure included the staff. Thirty two cases of tuberculosis were notified and 66 inactive cases were discovered.

C. CHEST X-RAY CENTRE (See Tables I, II and V)

The number of films taken at this Centre has increased from 38,876 to 47,512 during 1963. This has been the result of the publicity given to the implementation of Compulsory Surveys. Seventeen cases of active tuberculosis were discovered in these films, while 203 cases were discovered as inactive. All but one of the active cases were self referrals, the exception being a recruit from the Commonwealth Public Service. This number, however, shows a significant lowering as compared with the figure for 1962 which was 52. A further 199 cases had incomplete investigations which are continuing and at least 9 of these are suspect active cases of tuberculosis.

Conditions other than tuberculosis, detected at the X-ray Centre have been listed in Table II.

RADIOLOGICAL SURVEYS BY THE ANTI-TUBERCULOSIS ASSOCIATION

These surveys are considered under three headings, those at the Anti-Tuberculosis Association Clinic and during their Metropolitan and Country Surveys. No comparable figures are available for previous years. Statistics may be seen in Tables VIII, IX.

The total number X-rayed in the Metropolitan area was 438,667 resulting in the discovery of 100 active cases of tuberculosis; 3,737 inactive cases of tuberculosis; 30 suspect active tuberculosis; and 3,301 other conditions. In addition, 58 cases from the previous year's survey were found to be active.

A comparable result was seen in the Country areas where 147,256 persons were X-rayed resulting in the discovery of 31 active cases, 1,172 inactive cases, 5 suspect active cases, 1,780 cases suffering from other conditions and 16 further active tuberculosis cases from 1962 were reported.

GENERAL COMMENT ON MASS SURVEYS

Where an overall view is taken of the mass surveys by both the Division of Tuberculosis and the Anti-Tuberculosis Association, it will be observed that the yield of active cases in the under 20 age group is less than all other age groups. This would emphasise the increasingly evident fact that the under 21 age group need not be X-rayed except where they are Mantoux positive. Not only is there less tuberculosis in this group, but as is shown by examination of the Migrant statistics mentioned later the notifications in the under 20 age group come mainly from migrants. It is considered then that this age group could better be dealt with by adequate X-raying of all races of Migrants in all age groups and the X-raying of other Australian born Mantoux positive minors under 21.

ARRANGEMENTS FOR SPECIAL GROUPS

During the year, 70 mm. units were installed in Parramatta District Hospital, The Royal Prince Alfred Hospital and at Callan Park and North Ryde Psychiatric Hospitals. Installation of these units has yet to be completed in Manly District Hospital and Long Bay Gaol. The Commonwealth Government has also agreed to the installation or conversion of existing X-ray units in St. Margaret's, Rachel Forster and Wagga Wagga Hospitals.

The X-ray staff from the Royal Prince Alfred, Callan Park and Parramatta Hospitals were trained by the Chest X-ray Centre prior to taking up their appointments.

EPIDEMIOLOGICAL SURVEYS

In 1963, until the middle of August, the Epidemiology Section of the Division of Tuberculosis carried out Mass and Special Tuberculin Testing Surveys of school children; aborigines; Trainee Teachers; Army and other Commonwealth Personnel going overseas; contacts of tuberculous patients; and others at risk.

In August, mainly owing to the enforcement of compulsory chest X-raying and consequent on the positive reactor's household and other contacts being X-rayed, the nursing and clerical staff of the Epidemiology Section was transferred and the Epidemiological programme was taken from the control of the Division of Tuberculosis and transferred to the School Medical Service.

B.C.G. vaccination during 1963 was confined to aborigines, contacts of tuberculous patients, Army and other Commonwealth Personnel going overseas and those at risk and this service was continued by the Division of Tuberculosis throughout the whole year.

Prophylactic chemotherapy was arranged for the young positive reactor and for those with large positive reactions where considered necessary. Household contacts were followed-up.

Table XI will serve as a summary of results of Epidemiological work, but due to the change in method of statistics relating to this work a somewhat different value should be placed on these results this year.

Mass Tuberculin Surveys

These surveys ranged in the North from the coastal areas of Tweed Heads, Lismore, Grafton, the Tablelands region of Tenterfield, Glen Innes and Armidale districts, to the Southern Tablelands, from Cooma and the Snowy River to Queanbeyan, Bowral and Mittagong districts. Metropolitan areas were also surveyed.

The results in the country followed the usual pattern, showing higher positive reactor rates in the North compared with those of the South, and lower rates in the Tablelands than either the Coastal or Plains areas.

The results of these reactor rates are given below:—

North Coast, i.e. Casino 24.6 per cent, Tomki 28.6 per cent, Kyogle and Shire 26.2 per cent.

South Coast (latter part of 1962) Shoalhaven 10.2 per cent, Shire of Eurobodalla 6.7 per cent, Shellharbour 9.8 per cent.

Northern Tablelands, Macintyre Shire 8.7 per cent, Tenterfield and Shire 14.8 per cent, Glen Innes and Severn 7.8 per cent.

Southern Tablelands, Cooma 4.4 per cent, Bombala 2.8 per cent, Snowy River 3.09 per cent, Moss Vale and Wingecarribee 5.1 per cent.

Aborigines of all ages where available, were tested. A noticeable general improvement in their health has gradually occurred and they have become on the whole more co-operative. Commonwealth officers including Army personnel and others going overseas were also tuberculin tested. Trainee Teachers and others who could be a risk or were at risk, e.g., medical and nursing staff, were surveyed. The positive reactor rate of the Trainee Teachers, i.e., the young adult rate, was found to be 21.9 per cent. (The figure usually ranges from 18 per cent to 21 per cent.)

Special Surveys. These were conducted, at the request of the Doctor or Officer in Charge, on Nurses and Aides at The Lottie Stewart and at Auburn District Hospitals, on patients at the Spastic Centre, Mosman, and on patients at Lorna Hodgkinson Home.

A Special Survey of aborigines, following the notification of one with pulmonary tuberculosis, was conducted at Balranald and Dareton in South West New South Wales. No increase in the positive reactor rate was found.

B.C.G. Vaccinations. This vaccine was given to negative reactors including Aborigines in districts visited; Commonwealth officers including Army Personnel and others going overseas; and Medical, Dental and Veterinary Nurses and others at risk.

Conversion Mantoux rates of white persons after 1 year was found to be 91.1 per cent.

Prophylactic Chemotherapy of young persons and of the strongly positive reactor, continued to be advised by referring these persons to their own medical practitioner or to a clinic.

Follow-up of the positive reactor was restricted this year to the first parental letter of advice.

Note: The figures shown for tuberculin testing are from January to August, 1963. No comparable figures for a similar period are available in previous years.

VISITING NURSE SECTION

Table XII indicates during 1963, certain of the duties carried out by the Sisters of this Section in the Metropolitan area; comparative figures are given for 1962. Although nursing visits to homes decreased by 3,387 an increase of 401 working days was spent by the nurses at the Clinics. As in 1962, this was due to an increased work load in the Clinics which are staffed by the Tuberculosis Division Sisters.

Additionally more relieving services were supplied to the Health Districts. Again, with the rising numbers of persons attending the Mass Surveys, an increase in the volume of work was associated with Mass Survey follow-up at the mobile doctors' unit and one of the Sisters helped the Medical Officer with the interviewing of patients who had abnormal films.

As no Clinic Sister was appointed to the Broken Hill District in 1963, only minimal essential work could be provided there by one of the Domiciliary Sisters. Much work and effort is needed to bring the tuberculosis work in this area up to the desired standard.

As in 1962, all White Russians who arrived in Sydney in 1963 were investigated. Due to the close liaison with the World Council of Churches these cases were adequately followed up. However, much less success was obtained in the case of other migrants, as the Immigration Department was very often unable to provide correct addresses, especially in the case of British Assisted Migrants and very often by the time chest X-rays of the British group were received by the Division of Tuberculosis, a large number of those with abnormal films could not then be traced. During the last few years more than 150 persons in this category have not been traced, each of whom is either an active or potentially active case of tuberculosis.

Following the implementation of Compulsory X-ray Surveys, 240 people were visited by the Sisters after the Lane Cove Survey. These people had failed to respond to previous approaches made by advice cards or letters from the Division. This task was not an enviable one for many interviews were made out of working hours, but the work was, in the main, very successful. Only six will be prosecuted by the Department of Public Health for non-attendance at the Mass Survey.

TUBERCULOSIS ALLOWANCE SECTION

Table XIII shows the number of patients receiving Tuberculosis Allowance who are receiving either Institutional or Domiciliary treatment, and it also shows the length of time these persons have been in receipt of this Allowance.

An increase of 31 persons were in receipt of the Allowance at the close of the year compared with the figure for 1962.

A study was made of all chronic cases of tuberculosis in receipt of Tuberculosis Allowance for six years or more. All cases were assessed during the last six months of their disease. Those living at home were found to have satisfactory home conditions and where necessary further drug trials have been arranged. The majority of cases were resistant to all the first line drugs while some not only had resistant organisms to a variety of second line drugs, but they also had allergic reactions to these drugs. Surgery has been performed in all cases where practicable except in one instance when this was refused. This case is being followed up.

In the near future an assessment will be made of all cases that have had Tuberculosis Allowances longer than one year.

The Tuberculosis Housing Committee has this year nominated a further 36 families for Housing Commission accommodation. This brings the total number nominated to 378 since the inception of the scheme.

CASE REGISTER

Details of Tuberculosis notifications are set out in statistical Tables XIV, XV, XVI, XVII and XVIII. Unlike 1962, the figures have not been given by Health Districts, but it is hoped that this will be possible next year. The information in Table XIV shows the age, sex and the stage of the disease for new active and probably active cases of pulmonary tuberculosis while Table XV shows the classification of primary lesions, pleural effusions, reactivated lesions, quiescent cases, atypical and non-pulmonary cases by age, sex and type.

The number of new cases of tuberculosis notified in New South Wales during 1963, was 1,375, which included 1,039 active cases of pulmonary tuberculosis. This was 85 less than the figure for 1962. This was due to the new method of collecting statistics, which entailed the non-acceptance of cases for statistical purposes until the completion of all bacteriological investigations had been carried out which accounts for the drop in notifications during the year.

The rate of new cases of Tuberculosis was 33.94 in 1963. This figure can be compared with the rates from other years in Table XVI. It should be emphasised that this drop in case rate from the previous years is not a real one due to the new method of collecting statistics—the cases are not now included until the bacteriological investigations have been completed—this could result in a two to three month delay in their incorporation.

A realistic figure should be shown in the 1964 figures. The key years would be 55.96 in 1950 (the date of the commencement of the State Campaign against Tuberculosis), 62.88 in 1954 (the highest rate), 30.99 in 1959 (the lowest rate) and 36.71 in 1962. The overall pattern is that of a gradual lessening although the slightly raised figures in the latter years could be related to a replanning of mass surveys. The frequency of these is associated with the incidence in the area. It is not expected that there will be a marked lessening of these rates within the next five years.

In examining the death rate from tuberculosis from 1950 onwards it is to be noted that beyond the marked drop in the years 1950-1957 the rate has remained almost constant. It is not expected that this rate will decrease much further until the residium of the old chronic active cases who have not responded to treatment are deceased. As most of these are in the fifty age group it is considered that the rate will not noticeably drop for some ten years.

The effects of modern therapy, particularly chemotherapy have been responsible for the initial drop, in addition to the many case finding methods which result in the disease being found at an earlier stage. By referring to Table XVII it can be seen that the numbers of advanced cases found are gradually lessening and it is from this group that the majority of deaths arise.

When commenting on the figures shown in Table XVII it must be pointed out that no statistics in this form were kept prior to 1954 and since then further changes in classification occurred in 1960, 1961 and 1963. Since 1954 the total notifications have dropped and so rather than consider the percentage of each form or stage of disease a more adequate picture can be obtained by comparing the numbers.

A marked and continued drop in the total numbers of minimal, moderately advanced and advanced cases can be noted over these years. The rise in extra pulmonary classifications is undoubtedly related to immigration as many of these cases are migrants who were probably infected prior to their arrival in Australia. The death certificate figure has slightly lessened, but until the medical profession as a whole can be fully educated to notify on diagnosis this figure will remain high.

As an example of this, all cases of tuberculosis notified by death certificate who had not already been notified as a case of tuberculosis were followed up. Out of seventy four cases considered, fifteen showed that the time that elapsed between the date of diagnosis and notification by death certificate varied by ten years down to one year, and in eight cases there had been bacteriological proof of this originally and radiological evidence at least in the remainder.

Although there has been a slight rise in the number of primary cases notified since the end of 1960, this need not be regarded as significant. Pleural effusion cases are at the same level, but these may be regarded similarly to the primary ones. Reactivated, quiescent and atypical cases have been included in the statistics for the first time.

The definition of a reactivated case is that case which has shown bacteriological or radiological proof of extension after a period of three years inactivity following surgery or cessation of chemotherapy. Cases which break down in the intervening period are not included in this category. It is considered that this figure will gradually decrease if the treatment of tuberculosis cases remains satisfactory.

Quiescent cases are those where disease is regarded as being intermediate between active and inactive. The term quiescent requires negative bacteriological findings and stable lesions, but it allows the presence of cavitation. It is expected that this group may increase in number as the campaign approaches the control stage.

In Table XVIII it can be seen that the greatest source of discovery of these cases was by Mass Miniature X-rays and totalled 42.7 per cent, an increase of 7.7 per cent over the figure for 1962. Private Practitioner notifications decreased from 19.2 per cent to 15.7 per cent and Hospitals from 18.8 per cent to 10 per cent.

The sex ratio for tuberculosis, male/female has again slightly increased during 1963. These ratios over the last 6 years are shown below:—

Year			Total Noti- fications	Total Males	Total Females	Ratio	
						M.	F.
1958	..	..	1,399	959	440	1	0.46
1959	..	..	1,166	789	377	1	0.48
1960	..	..	1,533	1,068	465	1	0.45
1961	..	..	1,455	1,041	414	1	0.40
1962	..	..	1,460	1,040	420	1	0.40
1963	..	..	1,375	963	412	1	0.43

The total number of deaths from tuberculosis in 1963 was 185:—

Pulmonary tuberculosis	156
Pulmonary tuberculosis associated with an occupational disease of the lung	10
Tuberculosis of an unspecified site	4
Tuberculosis of the meninges and C.N.S.	4
Tuberculosis of bones, joints	5
Tuberculosis of genito urinary system	2
Tuberculosis of adrenal glands	1
Disseminated tuberculosis	3
	<hr/>
	185

When this is compared with the total number of deaths recorded in 1962, a decrease is observed from 218 to 185. These cases include only those where tuberculosis was related to the cause of death. Cases where the patient died from other causes where the patient had a past history of tuberculosis have been excluded.

MIGRANTS

The total number of migrants notified during 1963 was 283—210 males and 73 females. As these figures do not include the reactivated cases nor those notified by death certificate it can be shown that the migrant percentage of the notifications is 24.4 per cent which figure with the exclusion of the 1962 figures which were not complete, has risen by approximately 4 per cent. It is of interest to note that the male/female ratio 1 : 0.35 is lower than the ratio of total notifications, i.e., 1 : 0.43. Also from the age of 20 years onwards the male and female rate remained fairly constant for each sex. As has been mentioned before, there was a greater preponderance of migrant notifications in the age group 15-29 inclusive when compared with the Australian born persons in the same age groups.

Of the 283 migrant notifications of tuberculosis, 20 were notified within one year of arrival; 59 within 1-5 years; 36 within 6-10 years; and 168 over 10 years.

Other problems have also risen with relation to the migrant population. No check, at present, can be made of the unassisted migrant; in particular the British migrant; while many of the assisted migrants with abnormal X-rays taken overseas have not been able to be traced. A list of 150 of such cases of either active, suspect active or inactive disease has been sent to the Commonwealth Health Department. It is hoped that the Commonwealth Health Department and the National Health and Medical Research Council will be able to help in overcoming this problem.

HOSPITAL RETURNS

Tables XIX, XX, XXI, XXII and XXIII. Hospital returns are tabulated in the above Tables.

The high incidence of tuberculosis in the Psychiatric Hospitals is well evidenced by Tables XIX and XX. A total of 75 active cases from 11,252 persons X-rayed in both Metropolitan and Country areas represents an incidence of 6.66 cases per 1,000 and demonstrates the continuing need for an active programme of tuberculosis control in these Institutions.

No comparative tables are available for the previous years in the case of Tables XXI, XXII and XXIII and require no comment.

Owing to unforeseen difficulties, the statistics relating to hospitals coming under the control of the Hospitals Commission will not be available until 1964.

TUBERCULOSIS IN THE HEALTH DISTRICTS

Visits were made to Health Districts with the exception of the Newcastle and North Western areas. The standard of Tuberculosis administration in these districts is proceeding satisfactorily. Clinic record keeping showed an improvement, but in some cases more attention needs to be paid to the recording of patients' visits and their follow-up. These matters have been discussed with the Staff members concerned in the districts and a subsequent visit showed that the previous discrepancies are being rectified. New Sisters appointed to Districts attended a three weeks' refresher course held by officers of the Division of Tuberculosis.

Brief notes on tuberculosis control work from each Centre are given below:—

Newcastle Health District

During this year the Anti-Tuberculosis Association of New South Wales carried out Mass Miniature Radiography Surveys in the Shires of Wyong and Gosford. A total of 30,169 people were X-rayed representing 73 per cent of the estimated eligible population. From these films 11 cases were found to be active and 11 cases were still under investigation. Inactive cases of tuberculosis totalling 484 were reported and 352 other non-tuberculous abnormalities were detected.

All the Psychiatric Hospitals in this area were surveyed by the Anti-Tuberculosis Association and a total of 3,137 patients were X-rayed. From this number seven cases are at present under investigation while 42 inactive tuberculosis cases and 78 other non-tuberculous conditions were found.

Several of the Clinics in this area have shown an increase in attendances especially at Gosford and Newcastle. The Maitland Clinic has now been opened and should take cases from the overloaded Cessnock Clinic.

North Coast Health District

At the beginning of the year the Anti-Tuberculosis Association carried out a Mass Miniature Radiography Survey of the Shires of Kyogle, Woodburn, Tomki, Tintenbar, Terania, Tweed, Byron, Maclean, Ulmarra, Coff's Harbour and Bellingen and the Municipalities of Casino, Ballina, Lismore and Mullumbimby and the City of Grafton.

From these areas a total of 91,550 people were X-rayed representing 75.7 per cent of the estimated eligible population—this figure was lower than was expected due to the floods. Twenty seven cases of active tuberculosis were found and 15 cases are still under investigation while 585 inactive cases of tuberculosis and 1,081 other non-tuberculous abnormalities were detected.

Teams from the Epidemiology Section of the Division of Tuberculosis carried out mass tuberculin testing of school children in advance of the mobile units. The results followed the normal pattern of higher positive reactor rates in the North compared with the Southern parts of the State and these findings are to be observed in the report of the Epidemiological Section. Tuberculin testing of all aborigines at Cabbage Tree Island Station and Box Ridge and Curawee Reserves were carried out by the Sister-in-Charge, Lismore Chest Clinic, with subsequent B.C.G. vaccination, where indicated, by the Deputy Medical Officer of Health, Lismore.

As a result of negotiations with the Lismore Base Hospital Honorary Medical Officers Board, the responsibility for clinical supervision of both in-patients and out-patients was transferred from the Deputy Medical Officer of Health to the local physicians of the North Coast Health District on the 1st May, 1963. These Physicians possess more appropriate qualifications and have had experience in tuberculosis.

The transfer of the Macksville (Nambucca Shire) Sub-clinic to the North Coast Health District became effective in September, 1963.

South Coast Health District

The Miniature Mass X-ray Surveys were carried out by the Tuberculosis Divisional units in the Shires of Shoalhaven, Eurobodalla, Mumbulla, Imlay, Bibbenluke, Snowy River, Monaro, Yarrowlumla, Mittagong, Wingecarribee and Wollondilly and the Municipalities of Bega, Bombala, Cooma, Queanbeyan and Bowral. A total of 55,417 people attended with an average of 73.6 per cent attendance for the area. Twenty seven cases of active tuberculosis were found and eight cases are still under investigation while 195 inactive cases of tuberculosis were detected as well as 404 other non-tuberculous abnormalities. The highest incidence of tuberculosis was found in the Shoalhaven, Eurobodalla and Yarrowlumla Shires and the Queanbeyan Municipality.

The Wollongong Chest Clinic is now established in temporary and more satisfactory quarters at the District Hospital. The Commonwealth Government has approved of the final plans for the building of a new Tuberculous In and Out patient Block at Wollongong.

A new tuberculosis clinic was established at Bega.

North Western Health District

Miniature Mass Radiography Surveys were carried out by the Anti-Tuberculosis Association in the Shires of Manilla, Barraba, Yallaro, Bingara, Macintyre, Ashford and Severn, and the Municipalities of Inverell, Glen Innes and Tenterfield. A total of 25,537 people were X-rayed, representing 74.2 per cent of the estimated eligible population. Three active cases were found with five still under investigation while 214 inactive cases were detected as well as 347 other non-tuberculous conditions. Hydatid disease was found to be a feature in some areas such as Walcha.

An increased attendance at most clinics has been noted. The establishment of a sub-clinic at Inverell is being considered.

The Department of Agriculture has intensified its efforts to have all cattle tested for tuberculosis.

The Medical Officer of Health and the Deputy Medical Officer of Health were registered as B.C.G. Vaccinators.

Two Mantoux Surveys were carried out at Gwabyan and Wee Waa by the Sister-in-Charge of the Tuberculosis Services. The Survey at Wee Waa was undertaken at the local school which is supplied with milk from a dairy where 5 cows were discovered to be infected with tuberculosis. The tests pointed to a source of human infection, and in one family both the parents were found to have tuberculosis. At Gwabyan the school teacher was found to have tuberculosis.

Western Health District

Miniature Mass Radiography Surveys were carried out in the latter part of the year by the Division of Tuberculosis in the Shires of Blaxland, Cudgegong, Coolah, Molong, Lyndhurst, Colo and Rylstone, and the Municipalities of Lithgow and Mudgee. In these latter Municipalities the implementation of Compulsory X-rays was being carried out for the first time in a country area—the results will be finalised early in 1964.

A total of 31,621 people were x-rayed, with an average attendance of 71 per cent of the population of the area. One active case of tuberculosis has so far been reported, but 73 cases are still under investigation, while 55 inactive cases were found as well as 285 other non-tuberculous abnormalities.

TUBERCULOSIS IN THE MINING INDUSTRY

The problem of tuberculosis in these Industries has been discussed with Dr. K. G. Outhred the Chief Medical Officer of the Joint Coal Board and Dr. J. Cullen the Medical Officer in Charge of the Bureau of Medical Inspection at Broken Hill. The following list demonstrates the notified cases of tuberculosis related to these industries over the latter few years.

						Joint Coal Board	Bureau of Medical Inspection		
1956	..	..	..	..	..	5	—	}	Not available
1957	..	..	..	..	..	9	—		
1958	..	..	..	..	..	8	—		
1959	..	..	..	..	..	8	9		
1960	..	..	..	..	..	2	4		
1961	..	..	..	..	..	3	3		
1962	..	..	..	..	..	3	5		
1963	..	..	..	..	..	4	2		

The Joint Coal Board has a scheme in operation for ex-tuberculosis patients whereby they may return to selected work in the industry. At present, the number of coalminers under compulsory withdrawal, because of pulmonary tuberculosis, is nine.

The scheme is one of temporary suspension from work, the tuberculosis patients being paid a small allowance whilst unfit for employment. Close supervision is paid to their health and their assessment prior to their return to work.

Pneumoconiosis is not now regarded as a serious danger to workers in the mining industry although this lung condition was regarded as an industrial hazard some few years ago.

IMPLEMENTATION OF COMPULSORY X-RAYS

As a result of a Ministerial decision earlier this year it was decided to implement the compulsory provisions of the Public Health Act for the Miniature Mass Radiography Surveys. This was applied to persons of the age of 21 years or over and the first Survey of this nature was conducted in the Lane Cove area. Application to prosecute has been made in six cases who failed to show adequate reason for non-attendance at this Survey and these prosecutions will be heard early in 1964.

Comparisons between surveys in 1959 and 1963 at Lane Cove are as follows:—

										1959	1963
Attendances	..	..	..	..	..	..	..	..	..	8,345	17,565
Active cases	..	..	..	..	..	..	..	..	..	3	10
Inactive cases		..	..	..	..	..	..	..	..	17	31
Other abnormalities			..	..	..	..	..	..	..	32	67

The attendances quoted in both instances above includes people under the age of 21 and others from surrounding districts.

From the above it can be seen that the implementation of Compulsory X-rays has resulted in the finding of more active cases in 1963 and this will undoubtedly lead to the earlier control of tuberculosis in New South Wales. For the carrying out of this Survey the use of machine aids was necessary for the production, punching and sorting of master cards and attendance cards for people on the electoral roll.

Certain conclusions were reached following the completion of this Survey in Lane Cove. It was observed that in dealing with large numbers of persons who attend for mass Surveys that it would be an impossible task to deal with these numbers without either the aid of sorting machines or the employment of extra staff.

It should be stressed that the medical and clinical results of the Survey have exceeded the original designs of the Survey and the medical results have shown the need for implementation of Compulsory X-rays while in the State the public, at the same time, has been provided with a most desirable service.

RECALCITRANT CASES AND THE REPATRIATION DEPARTMENT

The recalcitrant patient, whether under Repatriation entitlements or not, has always provided a public health problem because of his inability to accept the prescribed regimen of treatment. Very often these cases leave hospital against medical advice and frequently after a short stay, despite the activity of their disease, wander at large in the community.

Whilst it was possible to achieve some degree of control on the ordinary case of tuberculosis, by threatened or actual suspension of the Tuberculosis Allowance, this method was not applicable to the Repatriation patient. The Repatriation Department could apply various methods of restricted control, but financially the patient could not be affected. The final step by the Repatriation Department was to debar them from in and out patient treatment by the Repatriation Department and they then referred these cases to the Division of Tuberculosis for further control but their pension was still not affected.

As a result of several discussions with the Repatriation Department they have agreed that they will hold the service pension in trust where a recalcitrant patient refuses to accept proper medical treatment and they will continue to do so until such time as the patient behaves in a manner requested of him.

A study is being made of recalcitrant patients generally and it is hoped, during 1964, to submit a report and recommendations concerning these cases and their problems from the public health aspect.

COMMONWEALTH HEALTH MINISTERS CONFERENCE

In April, 1964, a Conference was held in Melbourne under the auspices of the Commonwealth Health Department. All States were represented. It was the first conference held at this level since the initial conference fourteen years ago. Senator Harrie W. Wade stressed the need for a uniform approach to tuberculosis control and discussions were held on all aspects of this control.

Certain recommendations and opinions arose from this Conference, which were as follows:—

- (a) Each State will direct that attendances at community chest X-ray Surveys shall be compulsory and effectively enforced.
- (b) Each State will provide adequate chest clinics for the control of tuberculosis with sufficient full time medical officers working directly under the State Director of Tuberculosis and the State will also provide a sufficiency of clerical staff to maintain adequate records including an effective case register.
- (c) That the Commonwealth-States-Tuberculosis Agreement should be continued for a further period of five years.
- (d) It was agreed that additional steps should be taken to ensure that migrants do not spread tuberculosis in Australia. This general issue was to be taken up with the Immigration Department and the Commonwealth Health Department.
- (e) The Commonwealth Government would give sympathetic hearing to any reasonable proposition for investigation and research into Tuberculosis problems.
- (f) The importance of an adequate notification system was stressed.
- (g) The importance of contact follow-up was also stressed.

CONCLUSION

During 1963 further advances have been made in the campaign against Tuberculosis, but examination of various aspects shows there are several aspects of tuberculosis which require further close study, namely the migrant population, orientation of the general practitioner in tuberculosis control and a re-assessment of the problem of the resistant strains of the mycobacterium tuberculosis.

This opportunity is taken to thank the Senior Officers of the Department of Public Health, the staff of the Division of Tuberculosis and extra-Departmental Bodies for the assistance given and co-operation received.

TABLE I—SUMMARY OF X-RAYS DONE ON MMR. SURVEYS, THE CHEST X-RAY CENTRE AND SPECIAL SURVEYS

	Total No. X-rayed	Estimated per cent of pro- claimed area	Chest clear	No. of large films Rerayed	Percentage	Technical Faults	Percentage	Active Cases previously known	Active Cases not pre- viously known	Cases per 10,000	Cases of inactive Tuber- culosis	Other abnormali- ties	Under investiga- tion
Country	86,805	81.5	84,738	571	0.65	752	0.86	....	26	2.99	162	512	84
Metropolitan	259,671	68.2	254,516	1,631	0.63	682	0.26	1	82	3.19	812	1,767	180
Total	346,476	70.7	340,254	2,202	0.63	1,434	0.41	1	108	3.14	974	2,279	264
Special Surveys	12,726	....	12,505	39	0.31	143	1.13	....	3	2.36	14	13	9
Chest X-ray Centre	47,512	....	45,803	425	0.89	397	0.83	....	17	3.37	203	376	199

TABLE II—SUMMARY OF NON-TUBERCULOUS ABNORMALITIES RE-RAYED DURING 1963

	City	Country	Chest Centre
<i>Carcinoma:</i>			
(1) Proven by biopsy	20	2	9
(2) Radiological diagnosis	14	2	1
(3) Secondary	9	6	2
(4) Leukaemia	1	....	....
(5) Lymphosarcoma	1	....	....
Simple tumours	7	5	2
Sarcoidosis	6	2	....
Silicosis	27	14	2
Hydatid disease	2	3	....
Toruloma	1	....	1
Spontaneous pneumothorax	3	1	2
Post-radiation fibrosis	13	3	1
Substernal thyroid	16	3	....
Lung abscess .. .. .	....	1	2
Diaphragmatic abnormalities including Hiatus Hernia	16	4	3
Pneumonia, acute pneumonitis etc.	98	33	43
Bronchiectasis	24	17	9
Pleural effusion of uncertain cause .. .. .	....	....	3
Achalasia of oesophagus .. .. .	....	....	1
Enlarged glands of uncertain origin .. .. .	....	....	1
Generalised fibrosis of uncertain origin	3	1	....
Bony abnormalities including tumours	5	6	....
Cysts of uncertain aetiology	6	7	....
Cardio-vascular abnormalities re-rayed	39	24	7
Chronic inflammatory and degenerative conditions, emphysema, cystic disease, chronic pleurisy etc.	305	101	64

TABLE III—TUBERCULOSIS—MASS X-RAY SURVEYS—FOR THE YEAR ENDED 31ST DECEMBER, 1963

Age	No. X-rayed	Active and Probably Active	Inactive	Suspect active at 31/12	Other conditions	Active from Survey of previous years
	<i>Country Areas</i>					
-15	NOT AVAILABLE	..	1	0	6	
15-19		3	1	1	17	
20-24		0	0	2	14	
25-29		0	2	0	7	
30-34		3	8	0	17	
35-39		3	13	1	14	
40-44		1	14	1	26	
45-49		1	17	0	39	
50-54		0	26	2	57	
55-59		2	19	3	66	
60-64		2	21	2	69	
65-69		3	10	1	64	
70-74		5	14	4	57	
75-		4	16	0	59	
Totals	86,805	27	162	17	512	

TABLE IV—TUBERCULOSIS—MASS X-RAY SURVEYS—FOR THE YEAR ENDED 31ST DECEMBER, 1963

Age	No. X-rayed	Active and Probably Active	Inactive	Suspect active at 31/12	Other conditions	Active from Surveys of previous years
	<i>Metropolitan Area</i>					
-15	NOT AVAILABLE	0	0	0	14	
15-19		2	8	2	40	
20-24		5	8	3	35	
25-29		5	14	1	49	
30-34		5	33	3	62	
35-39		10	41	1	80	
40-44		13	74	3	106	
45-49		8	77	3	130	
50-54		8	94	4	169	
55-59		4	98	1	194	
60-64		6	93	1	212	
65-69		6	87	3	207	
70-74		5	84	3	196	
75-		6	101	4	273	
Totals	259,671	83	812	32	1,767	

TABLE V—TUBERCULOSIS—MASS X-RAY SURVEYS—FOR THE YEAR ENDED 31ST DECEMBER, 1963
Chest X-ray Centre

Age	No. X-rayed	Active and Probably Active	Inactive	Suspect active at 31/12	Other conditions	Active from Survey of previous years
-15	NOT AVAILABLE	0	0	0	7	
15-19		0	5	0	18	
20-24		1	4	0	18	
25-29		3	12	0	11	
30-34		2	11	0	17	
35-39		3	20	1	27	
40-44		1	31	2	32	
45-49		3	19	0	27	
50-54		3	36	0	40	
55-59		1	16	2	43	
60-64		0	15	0	52	
65-69		0	14	2	37	
70-74		0	11	0	20	
75		0	9	2	27	
Totals ..	47,512	17	203	9	376	

TABLE VI—TUBERCULOSIS—SPECIAL SURVEYS—FOR THE YEAR ENDED 31ST DECEMBER, 1963

Age	No. X-rayed	Active and Probably Active	Inactive	Suspect active at 31/12	Other conditions	Active from Surveys of previous years
15-19	NOT AVAILABLE	0	0	0	3	
20-24		2	1	0	0	
25-29		0	0	1	2	
30-34		0	1	0	2	
35-39		1	2	0	0	
40-44		0	1	1	3	
45-49		0	2	0	0	
50-54		0	0	0	2	
55-59		0	2	0	0	
60-64		0	5	0	1	
65-69		0	0	0	0	
70-74		0	0	0	0	
75		0	0	0	0	
Totals ..	12,726	3	14	2	13	

TABLE VII—TUBERCULOSIS—MENTAL HOSPITAL SURVEYS—FOR THE YEAR ENDED 31ST DECEMBER, 1963

Age	No. X-rayed	Active and Probably Active	Inactive	Suspect active at 31/12	Other conditions	Active from Surveys of previous years
15-19	NOT AVAILABLE	0	0	0		
20-24		0	0	0		
25-29		1	2	0		
30-34		0	4	0		
35-39		1	2	0		
40-44		4	3	1		
45-49		7	4	2		
50-54		5	10	0		
55-59		2	8	0		
60-64		4	9	0		
65-69		4	11	0		
70-74		1	2	0		
75		3	11	0		
Totals ..	6,257	32	66	3		

TABLE VIII—TUBERCULOSIS—MASS X-RAY SURVEYS—ANTI-TUBERCULOSIS ASSOCIATION OF N.S.W.—
FOR THE YEAR ENDED 31ST DECEMBER, 1963

Age	No. X-rayed	Active and Probably Active	Inactive	Suspect active at 31/12	Other conditions	Active from Survey of previous years
	<i>Metropolitan Area</i>					
-14		0	13	0	24	0
15-19		2	31	2	115	1
20-24		5	49	..	118	2
25-29		2	96	2	120	6
30-34		7	165	4	126	7
35-39		13	276	5	205	7
40-44		11	344	1	240	5
45-49		11	408	2	312	5
50-54		13	440	4	395	11
55-59		8	496	6	405	2
60-64		6	449	1	440	2
65-69		10	351	1	358	3
70-74		4	325	2	213	4
75		8	294	0	230	3
Totals ..	438,667	100	3,737	30	3,301	58

TABLE IX—TUBERCULOSIS—MASS X-RAY SURVEYS—ANTI-TUBERCULOSIS ASSOCIATION OF N.S.W.—
FOR THE YEAR ENDED 31ST DECEMBER, 1963

Age	No. X-rayed	Active and Probably Active	Inactive	Suspect active at 31/12	Other conditions	Active from Survey of previous years
	<i>Country Areas</i>					
-15		0	4	0	32	0
15-19		0	8	0	49	0
20-24		2	13	0	37	0
25-29		2	17	0	44	1
30-34		2	36	0	59	0
35-39		2	67	1	77	1
40-44		2	79	2	89	4
45-49		2	100	1	172	2
50-54		2	135	1	200	2
55-59		2	130	0	244	2
60-64		5	175	0	236	0
65-69		4	147	0	191	0
70-74		3	152	0	172	2
75		3	109	0	175	2
Not stated ..		0	0	0	3	0
Totals ..	147,256	31	1,172	5	1,780	16

TABLE X—EPIDEMIOLOGY SECTION—JANUARY, 1963 TO AUGUST, 1963

School Children:

No. of schools visited	751
No. Tested and Read	111,217
No. of Positive Reactors	16,537

Trainee Teachers:

No. Tested and Read	1,613
No. of Positive Reactors	354
Positive Reactor Rate	21.9 per cent.

Aborigines:

No. Tested and Read	690
No. of Positive Reactors	382
No. vaccinated	444

Contacts and Those at Risk:

No. Tested and Read	1,205
No. of Positive Reactors	458
No. vaccinated	365

Conversions of those previously B.C.G. vaccinated:

No. Tested and Read	79
No. of Positive Reactors	72
Conversion Rate after one year	91.1 per cent.

TABLE XI—SUMMARY OF WORK OF DOMICILIARY SISTERS IN METROPOLITAN AREA IN 1961 COMPARED WITH 1962

	1962	1963
No. of visits to cases receiving Streptomycin	11,868	10,427
No. of visits for dressings	1,644	1,169
No. of visits made at request of this Division other than Streptomycin or Dressings ..	13,889	10,840
No. of visits made at request of other Doctors, Clinics, etc.	1,159	2,737
Total Number of Visits	28,560	25,173
No. of working days at Clinic	1,317½	1,718

TABLE XII—TUBERCULOSIS ALLOWANCES—LOCATION OF ALLOWEES AS AT 31ST DECEMBER, 1963

	Receiving Treatment in Institution			Receiving Domiciliary Treatment		
	Males	Females	Persons	Males	Females	Persons
(A)						
-19	4	2	6	3	2	5
20-24	9	4	13	8	1	9
25-29	10	3	13	4	3	7
30-34	15	5	20	10	7	17
35-39	16	7	23	15	6	21
40-44	19	1	20	15	5	20
45-49	30	9	39	19	12	31
50-54	43	10	53	16	3	19
55-59	28	9	37	34	4	38
60-64	30	7	37	25	5	30
65-69	18	2	20	13	2	15
70-74	15	4	19	16	3	19
75	15	3	18	19	3	22
Totals ..	252	66	318	197	56	253
(B)						
Period in Receipt of Allowance				Males	Females	Persons
Under 1 year				319	91	410
1- 2 years				60	15	75
2- 3 years				18	3	21
3- 4 years				13	3	16
4- 5 years				9	1	10
5- 6 years				3	3	6
6- 7 years				4	0	4
7- 8 years				4	2	6
8- 9 years				4	2	6
9-10 years				5	1	6
10-11 years				6	0	6
11-12 years				4	1	5
Totals				449	122	571

TABLE XIII—STATE OF NEW SOUTH WALES—NOTIFICATIONS OF PULMONARY TUBERCULOSIS FOR YEAR ENDED 31ST DECEMBER, 1963
New Active Cases (and Probably Active Cases)—Showing Age, Sex and Stage of Disease

Age Group	Males				Females				Persons				Percentage	
	Min.	Mod. Adv.	Adv.	Death Cert.	Min.	Mod. Adv.	Adv.	Death Cert.	Min.	Mod. Adv.	Adv.	Death Cert.		Total
0-4	2	..	1	..	1 (1)	..	1	..	3 (1)	..	2	..	5	.5
5-9	1	..	..	..	1	..	..	..	2	..	..	..	2	.2
10-14	1 (1)	..	..	..	..	..	..	..	1 (1)	..	..	..	1	.1
15-19	5 (1)	5 (3)	..	..	6 (3)	2 (2)	..	..	11 (4)	7 (5)	..	..	18	1.8
20-24	14 (9)	13 (7)	2 (2)	..	10 (4)	6 (2)	..	..	24 (13)	19 (9)	2 (2)	..	45	4.4
25-29	17 (7)	9 (7)	3 (3)	..	16 (4)	7 (5)	2 (1)	..	33 (11)	16 (12)	5 (4)	..	54	5.2
30-34	12 (9)	13 (11)	3 (3)	1 (1)	13 (8)	8 (5)	2 (2)	..	25 (17)	21 (16)	5 (5)	1 (1)	52	5.0
35-39	34+1 (17)	28 (19)	4 (4)	..	17 (10)	14 (9)	2 (1)	..	51+1 (27)	42 (28)	6 (5)	..	99+1	9.5
40-44	25 (13)	33+1 (24)	8 (8)	1	19 (7)	17 (10)	1 (1)	1	44 (20)	50+1 (34)	9 (9)	2	105+1	10.1
45-49	14 (4)	28 (17)	13 (13)	4	3 (1)	11 (9)	3+1 (4)	3	17 (5)	39 (26)	16+1 (17)	7	79+1	7.6
50-54	35 (20)	34 (24)	6+1 (6)	5	14 (5)	12 (9)	3 (2)	3	49 (25)	46 (33)	9+1 (8)	8	112+1	10.7
55-59	27 (13)	34 (23)	5 (5)	3	8 (5)	14 (8)	2 (2)	3	35 (18)	48 (31)	7 (7)	6	96	9.2
60-64	22 (11)	37 (27)	10 (7)	8	2	10 (7)	3 (4)	3	24 (11)	47 (34)	13 (11)	11	95	9.1
65-69	14 (8)	38 (22)	7 (5)	5	6 (4)	10+1 (7)	1	2	20 (12)	48+1 (29)	8 (5)	7	83+1	8.0
70-74	18 (9)	41 (28)	4 (4)	6	8 (3)	11 (7)	..	3 (1)	24 (12)	52 (35)	4 (4)	9 (1)	89	8.6
75	9 (7)	44 (29)	8 (4)	19 (1)	7 (6)	10 (9)	2 (2)	4	16 (13)	54 (38)	10 (6)	23 (1)	103	9.9
N/S	..	..	1 (1)	..	..	..	..	..	..	..	1 (1)	..	1	.1
Total	250+1 (129)	357+1 (241)	75+1 (65)	52 (2)	129 (61)	132+1 (89)	22+1 (19)	22 (1)	379+1 (190)	489+2 (330)	97+2 (84)	74 (3)	1039+5	100.0
Percentage	24	35	7	5	12	12.8	2.2	2	36	47.8	9.2	7	100	..

Includes Transfers-in where signified

No.

(+5)

Includes Bacillary cases where signified

No.

(605)

TABLE XIV—STATE OF NEW SOUTH WALES—SUPPLEMENTARY RETURN OF TUBERCULOSIS NOTIFICATIONS FOR YEAR ENDED 31ST DECEMBER, 1963

Showing Age, Sex and Form

AGE GROUP	MALES							FEMALES							PERSONS							Total	Per-centage	
	Primary	Pleurisy with Effusion	Reacti-vated	Quies-cent.	Activity Undeter-mined	Atypical	Non-Pul-monary	Primary	Pleurisy with Effusion	Reacti-vated	Quies-cent	Activity Undeter-mined	Atypical	Non-Pul-monary	Primary	Pleurisy with Effusion	Reacti-vated	Quies-cent	Activity Undeter-mined	Atypical	Non-Pul-monary			
0-4	8	..	..	..	..	..	4 (3)	4 (1)	..	..	..	..	..	8 (6)	12 (1)	..	..	..	..	..	12 (9)	24(10)	7.4
5-9	1	..	..	..	..	..	2 (1)	1	..	..	..	..	..	1	2	..	..	..	..	..	3 (1)	5 (1)	1.5
10-14 .. ..	..	..	..	1	..	..	1	1	..	1 (1)	..	..	..	..	1	..	1 (1)	1	..	..	1	4 (1)	1.2
15-19 .. ..	..	2 (1)	1	..	..	..	..	+1	..	..	1	..	..	3	+1	2 (1)	1	1	..	..	3	7+1 (1)	2.1
20-24 .. ..	..	2	2 (1)	2	..	..	1	..	2	..	1	..	..	1	..	4	2 (1)	3	..	..	2	11 (1)	3.6
25-29 .. ..	..	..	4 (3)	2	..	1	8 (3)	..	2 (1)	1 (1)	..	..	..	3 (3)	..	2 (1)	5 (4)	2	..	1	11 (6)	21 (11)	6.8
30-34 .. ..	..	..	2 (2)	2	..	..	2 (2)	..	1	3 (3)	2	..	..	5 (4)	..	1	5 (5)	4	..	..	7 (6)	17 (11)	4.8
35-39 .. ..	..	2	3	4	..	..	8 (3)	..	..	6 (5)	1	..	..	1	..	2	9 (5)	5	..	..	9 (3)	25 (8)	7.4
40-44 .. ..	..	..	8 (5)	3	..	..	..	..	1	4 (2)	..	..	..	1 (1)	..	1	12 (7)	3	..	..	1 (1)	17 (8)	5.2
45-49 .. ..	..	2 (1)	13 (7)	4+1	..	2 (2)	3 (1)	..	1 (1)	9 (5)	3	..	..	3 (1)	..	3 (2)	22 (12)	7+1	..	2 (2)	6 (2)	40+1 (18)	12.7
50-54 .. ..	..	..	15 (8)	8+1	..	..	3 (3)	..	..	3 (1)	2	..	..	..	..	..	18 (9)	10+1	..	..	3 (3)	31+1 (12)	9.5
55-59 .. ..	..	2 (2)	12 (5)	6	..	1 (1)	2	..	..	10 (5)	..	..	1 (1)	1 (1)	..	2 (2)	22 (10)	6	..	2 (2)	3 (1)	35 (15)	11.0
60-64	1	2	12 (9)	6	..	..	2 (1)	..	1	5 (3)	1	..	..	1 (1)	1	3	17 (12)	7	..	..	3 (2)	31 (14)	9.5
65-69 .. ..	..	1	11 (8)	5+1	..	1	1	..	..	..	1	..	..	..	..	1	11 (8)	6+1	..	1	1	20+1 (8)	6.2
70-74 .. ..	..	1 (1)	6 (4)	2	..	..	1 (1)	..	..	..	1	..	..	1 (1)	..	1 (1)	6 (4)	3	..	..	2 (2)	12 (7)	3.7
75- .. ..	..	4 (1)	9 (6)	4	..	1 (1)	1 (1)	..	2 (1)	2 (1)	..	..	..	1	..	6 (2)	11 (7)	4	..	1 (1)	2 (1)	24 (11)	7.4
N/S.	1+1	+1	1+1	+1	1+2
Total	10	18 (6)	98 (58)	50+4	..	6 (4)	39+1 (19)	6+1 (1)	10 (3)	44 (27)	13	..	1 (1)	30 (18)	16+1 (1)	28 (9)	142 (85)	63+4	..	7 (5)	69+1 (37)	325+6	100	
Percentage ..	3	5.5	30.5	15.4	..	1.5	12	1.5	3	13.6	4	..	.3	9.7	4.5	8.5	44.1	19.4	..	1.8	21.7	100	..	

Includes Transfers-in where signified No. +6

Includes Bacillary cases where signified No. 137

TABLE XV—DEATHS FROM TUBERCULOSIS (ALL FORMS)—NEW CASES OF TUBERCULOSIS (ALL FORMS)

Year	Number of Cases	Mean Population	Rate per 100,000	Number of new Cases	Mean Population	Rate per 100,000
1950	671	3,193,208	21·01	1,787	3,193,208	55·96
1951	630	3,279,415	19·21	1,743	3,279,415	53·15
1952	495	3,341,476	14·81	1,803	3,341,476	53·96
1953	410	3,386,556	12·11	1,896	3,386,556	55·99
1954	347	3,428,549	10·12	2,156	3,428,549	62·88
1955	252	3,492,799	7·21	1,909	3,492,799	54·66
1956	325	3,556,672	9·14	1,690	3,556,672	47·52
1957	248	3,624,311	6·84	1,649	3,624,311	45·50
1958	190	3,696,049	5·14	1,399	3,696,049	37·85
1959	224	3,762,339	5·95	1,166	3,762,339	30·99
1960	172	3,834,085	4·49	1,533	3,834,085	39·98
1961	158	3,915,386	4·04	1,455	3,915,386	37·16
1962	218	3,980,675	5·48	1,460	3,980,675	36·71
1963	185	4,050,987	4·57	1,375*	4,050,987	33·94

* Includes Reactivated cases.

TABLE XVI—COMPARISON OF FORM AND/OR STAGE OF DISEASE FOR 1963 AS COMPARED WITH PRECEDING YEARS

Form and/or Stage of Disease			1954		1955		1956		1957		1958		1959		1960		1961		1962		1963	
			Cases	Percent- age of total notifica- tions	Cases	Percent- age of total notifica- tions	Cases	Percent- age of total notifica- tions	Cases	Percent- age of total notifica- tions	Cases	Percent- age of total notifica- tions	Cases	Percent- age of total notifica- tions	Cases	Percent- age of total notifica- tions	Cases	Percent- age of total notifica- tions	Cases	Percent- age of total notifica- tions	Cases	Percent- age of total notifica- tions
Primary ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10	0.6	10	0.6	17	1.2
Minimal ..	..	..	764	35.44	617	32.32	562	33.02	437	26.50	418	29.88	346	29.68	496	32.35	493	33.9	552	37.8	380	27.7
Moderately Advanced ..	..	..	978	45.36	739	38.71	791	46.47	911	55.25	692	49.46	540	46.31	675	44.04	622	42.8	526	36.0	491	35.7
Advanced ..	..	..	254	11.78	221	11.58	156	9.17	144	8.73	134	9.58	147	12.60	156	10.17	132	9.1	117	8.0	99	7.2
Pleural Effusion ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	11	0.72	29	2.0	36	2.5	28	2.0
Extra Pulmonary ..	..	..	48	2.23	50	2.62	50	2.94	44	2.67	52	3.72	39	3.35	78	5.08	90	6.2	113	7.8	70	5.1
Death Certificate ..	..	..	70	3.25	147	7.70	118	6.93	113	6.85	102	7.29	94	8.06	117	7.64	79	5.4	106	7.3	74	5.4
Reactivated ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	142	10.3
Quiescent ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	67	4.9
Atypical ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	7	0.5
Not Stated ..	..	..	42	1.94	135	7.07	25	1.47	..	..	1	0.07	..	..	..	..	..	..	..	..	..	..
			2,156	100.00	1,909	100.00	1,702	100.00	1,649	100.00	1,399	100.00	1,166	100.00	1,533	100.00	1,460	100.00	1,455	100.00	*1,375	100.00

• This includes reactivated cases.

TABLE XVII—TUBERCULOSIS—SOURCE OF NOTIFICATIONS—YEAR ENDED 31ST DECEMBER, 1963

Source	Pulmonary		No. of N/P Cases
	No. of Cases	Percentage	
Mass Community Surveys—			
T.B. Division 242 }	547	42	
A.T.A. 305 }			
Private Medical Practitioners:			
(a) direct 83 }	204	15·7	34
(b) via Chest Clinic 121 }			
General Hospitals	130	10·0	27
Chest Hospitals, Annexes and Sanatoria	50	3·8	4
Chest Clinics	174	13·4	2
Repatriation Clinics and Hospitals	39	3·0	1
Death Certificates	74	5·6	
Transfers in	10	0·7	1
Special Groups:—			
(a) Mental Hospital Surveys	47	3·6	
(b) Gaol Surveys .. .. .	..	..	..
(c) Ante-Natal Hospitals .. .. .	..	..	2
Epidemiology	14	1·1	..
Contact	14	1·1	1
Totals	1,303	100	72

TABLE XVIII—TUBERCULOSIS—ROUTINE HOSPITAL CHEST X-RAYS—PSYCHIATRIC DIVISION—YEAR ENDED 31ST DECEMBER, 1963

Age	No. X-rayed	Abnormalities Detected				Active from Survey of previous years
		Active and Probably Active	Inactive	Suspect Active at 31/12	Other conditions	
	<i>Metropolitan Areas</i>					
15-19		0	0	0	0	0
20-24		1	0	0	1	0
25-29		0	1	0	1	0
30-34		0	4	0	4	0
35-39		3	4	0	2	0
40-44		4	3	0	2	0
45-49		4	5	0	7	1
50-54		7	6	0	11	2
55-59		12	4	1	6	0
60-64		8	5	0	5	0
65-69		8	3	0	8	0
70-74		4	3	0	2	0
75-		5	3	0	6	0
Totals	8,039	56	41	1	55	3

TABLE XIX—TUBERCULOSIS—PSYCHIATRIC DIVISION—ROUTINE HOSPITAL CHEST X-RAYS—YEAR ENDED 31ST DECEMBER, 1963

Age	No. X-rayed	Abnormalities Detected				Active from Survey of previous years
		Active and Probably Active	Inactive	Suspect Active at 31/12	Other conditions	
	<i>Country Areas</i>					
15-19		0	0		0	
20-24		1	0		0	
25-29		0	2		2	
30-34		1	2		1	
35-39		3	2		4	
40-44		1	6		2	
45-49		2	4		2	
50-54		3	5		5	
55-59		1	6		4	
60-64		1	5		2	
65-69		3	4		6	
70-74		1	0		5	
75-		2	8		3	
Totals	3,213	19	44		36	

TABLE XX—TUBERCULOSIS—ADMISSIONS DURING YEAR ENDED 31ST DECEMBER, 1963
North Ryde Psychiatric Centre—Randwick Chest Hospital—Lidcombe State Hospital

Age	Males				Females				Persons			
	Investigation cases at 31/12	Pulmonary	Atypical	Non Pulmonary	Investigation cases at 31/12	Pulmonary	Atypical	Non Pulmonary	Investigation cases at 31/12	Pulmonary	Atypical	Non Pulmonary
0-4	0	0	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	1	0	0	0	0
15-19	0	2	0	0	0	0	0	1	0	2	0	1
20-24	0	7	0	1	0	6	0	0	0	11	0	2
25-29	1	3	0	1	0	5	0	0	0	7	0	1
30-34	0	7	1	1	0	6	1	0	0	13	0	1
35-39	4	25	0	3	0	12	0	2	3	37	0	5
40-44	1	20	0	3	1	14	0	0	1	34	1	3
45-49	3	32	1	0	0	9	1	0	1	41	1	0
50-54	3	34	0	0	1	18	1	0	3	52	0	0
55-59	1	55	0	0	0	9	0	0	1	64	0	0
60-64	5	50	0	0	1	11	0	0	4	61	0	0
65-69	1	34	1	0	0	11	1	0	0	45	0	0
70-74	2	25	0	0	2	9	0	0	3	34	0	0
75	4	28	0	0	0	17	1	0	4	45	0	0
Totals	25	322	3	9	5	127	5	4	20	449	2	13

TABLE XXI—TUBERCULOSIS—DISCHARGES DURING YEAR ENDED 31ST DECEMBER, 1963
North Ryde Psychiatric Centre—Randwick Chest Hospital—Lidcombe State Hospital

Age	Males				Females				Persons			
	Investigation cases at 31.12	Pulmonary	Atypical	Non Pulmonary	Investigation cases at 31.12	Pulmonary	Atypical	Non Pulmonary	Investigation cases at 31.12	Pulmonary	Atypical	Non Pulmonary
0-4	0	0	0	0	0	0	0	0	0	0	0	0
5-9	0	0	0	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	0	0	0	0	0
15-19	2	1	0	2	0	0	0	0	2	1	0	2
20-24	5	6	0	4	3	3	0	0	10	8	0	4
25-29	5	5	0	1	3	5	0	0	8	10	2	1
30-34	6	9	1	2	5	11	1	1	11	20	0	3
35-39	13	22	0	5	2	8	0	0	15	30	2	5
40-44	5	20	1	6	5	8	1	0	10	28	0	6
45-49	10	26	1	2	6	12	0	1	16	38	4	3
50-54	18	33	2	0	8	15	1	0	26	48	3	0
55-59	19	53	0	0	7	9	0	0	26	62	0	0
60-64	11	51	0	0	4	17	0	1	15	68	0	1
65-69	14	41	1	0	2	10	1	0	16	51	2	0
70-74	14	28	0	0	2	8	0	0	16	36	0	0
75	16	39	0	0	5	20	0	0	21	59	0	0
Totals	138	334	6	22	52	126	4	3	190	460	10	25

TABLE XXII—TUBERCULOSIS—LENGTH OF STAY IN AN INSTITUTION—RETURN FOR YEAR ENDED 31ST DECEMBER, 1963

Stage of Disease				<i>Initial Treatment Cases</i>		Non-Pulmonary
				Pulmonary	Atypical	
Investigation	N.R.P.C.	..	..	66	0	50
	R.C.H.	..	..	70	215	80
	L.S.H.	..	..	1 day—2 months	0	0
Minimal	N.R.P.C.	..	..	81	0	0
	R.C.H.	..	..	71	136	140
	L.S.H.	..	..	2 weeks—2 months	0	0
Moderate	N.R.P.C.	..	..	118	0	180
	R.C.H.	..	..	107	130	47
	L.S.H.	..	..	2—4 months	3 months	0
Advanced	N.R.P.C.	..	..	183	0	0
	R.C.H.	..	..	110	333	160
	L.S.H.	..	..	1—9 months	0	0
<i>Re-Treatment Cases</i>						
Investigation	N.R.P.C.	..	..	57	0	0
	R.C.H.	..	..	60	0	50
	L.S.H.	..	..	3 days—3 months	0	0
Minimal	N.R.P.C.	..	..	0	0	0
	R.C.H.	..	..	53	0	23
	L.S.H.	..	..	1 week—2 months	0	0
Moderate	N.R.P.C.	..	..	151	0	0
	R.C.H.	..	..	107	0	111
	L.S.H.	..	..	3 days—11 months	0	0
Advanced	N.R.P.C.	..	..	203	0	0
	R.C.H.	..	..	130	262	282
	L.S.H.	..	..	12 days—10 months	0	0

Poliomyelitis—Annual Report, 1963

Senior Medical Officer: DR. R. W. D. MAXWELL, O.B.E., M.B., Ch.B., D.P.H., D.T.M. & H.
Medical Officer: DR. J. R. B. BEAUMONT, B.Sc., M.B., B.S., D.A., F.F.A.R.A.C.S.
Staff: Two Clerks, One Office Assistant.

INCIDENCE OF POLIOMYELITIS

The year 1963 has been one of exceptionally low incidence of poliomyelitis throughout the State. Although 16 cases in all were notified during the year as poliomyelitis, or suspected poliomyelitis, 3 only were subsequently accepted by the Poliomyelitis Surveillance Committee as confirmed cases.

Details of these three cases are as follows:—

- (1) Female aged 62 years of Northbridge, Sydney. Date of onset of disease: 8th February, 1963. Bulbar and respiratory poliomyelitis.
- (2) Male aged 13 months of Gunnedah. Date of onset of disease: 20th February, 1963. Moderate paralysis of both lower limbs.
- (3) Male aged 7 years of Newtown, Sydney. Date of onset of disease: 28th October, 1963. Moderate paralysis of right lower limb.

None of these three patients had had any vaccination against poliomyelitis. No polio virus was isolated from specimens of faeces which were examined in each case, but Cocksackie A20 virus was isolated from Case 2.

Since the abrupt termination, at the end of May 1962, of the outbreak of poliomyelitis which occurred in New South Wales over 1961 and 1962, only six further cases have occurred over the following period of 19 months to the end of 1963. It is, therefore, of interest at this point to review the whole picture of the incidence of the disease since the commencement of poliomyelitis vaccination in this State. Table I, which follows, and the graph appended to this report, set out the monthly occurrence of poliomyelitis cases and deaths in New South Wales over the 7-year period, 1957 to 1963, immediately following the commencement of the Poliomyelitis Vaccination Campaign in July 1956. Cases are shown by months of actual *onset* of the illness, and not by months of notification. Similarly, deaths (shown in parentheses) are shown by months of actual *occurrence*, and are not, therefore, necessarily related to the cases shown for corresponding months.

TABLE I—POLIOMYELITIS IN NEW SOUTH WALES, 1957 TO 1963

	1957	1958	1959	1960	1961	1962	1963
Jan.	7 (1)	1	1	3	1	65 (2)	..
Feb.	11	1	2 (1)	2 (2)	..	55 (4)	2
Mar.	6 (1)	..	2	..	..	46 (5)	..
Apr.	5	1	2	1	1	6 (1)	..
May	6	..	1	..	3	2 (1)	..
June	2	..	..	..	4 (1)	..	..
July	2	..	.. (1)	..	11 (2)	1 (1)	..
Aug.	1 (1)	3	3	1	16 (1)	..	..
Sept.	1	..	..	..	21 (3)	..	..
Oct.	1 (1)	1	..	1	24	1	1
Nov. .. ..	..	1	3	..	60 (3)	1	..
Dec.	2	..	4	..	57 (2)	..	..
Yearly Totals ..	44 (4)	8	18 (2)	8 (2)	198 (12)	177 (14)	3

(Figures in parentheses indicate deaths).
Total cases: 456
Total deaths: 34

It will be seen that, since the commencement of poliomyelitis vaccination,—
the year 1963 has been the year of by far the lowest incidence of the disease,
the period of seven clear months between February 1963 and October 1963 has been the longest period of complete freedom from the disease throughout the State,
and the 17 months period from July 1962, until the end of 1963, has been the longest period during which no death from poliomyelitis has occurred anywhere in the State.

THE POLIOMYELITIS VACCINATION CAMPAIGN

Quantities of poliomyelitis vaccine issued to local authorities and private medical practitioners during 1963, with corresponding figures for the year 1962, were as follows:—

	1962	1963
First half year	759,157 doses	431,668 doses
Second half year	1,202,607 doses	356,650 doses
Total	1,961,764 doses	788,318 doses

The number of injections of poliomyelitis vaccine given at the Immunisation Centre during 1963 was 22,625, as compared with 71,200 during 1962.

In comparing the above figures for the years 1962 and 1963, it must be remembered that the circumstances during each of these two years were in marked contrast. At the beginning of 1962, fully adequate supplies of poliomyelitis vaccine again became available after a year of serious shortage which had necessitated the curtailment of all poliomyelitis vaccination programmes and, with the outbreak of poliomyelitis still at its height, there was a very large and pressing demand from the public for vaccination. This enabled an intensification of the whole Poliomyelitis Vaccination Campaign to an unprecedented level. Also, the introduction, in August, 1962, of a fourth dose to the prescribed course of poliomyelitis vaccination, brought forward a further large number of persons who, having completed their first three injections at any time in the past, were eligible to receive this additional “booster” dose.

The year 1963, on the other hand, has been an uneventful year of almost complete freedom from poliomyelitis throughout the State, and it was not to be expected that poliomyelitis vaccination programmes could be continued during 1963 at the exceptionally high level of activity of the previous year. Nevertheless it is during such “lean” years of low incidence of poliomyelitis that it is most difficult to persuade the public of the continuing need for protection through vaccination, if further outbreaks of the disease are to be avoided. A publicity campaign urging the need for continued poliomyelitis vaccination is planned for early 1964.

PROTECTION RATES OF POLIOMYELITIS VACCINE (SALK)

Tables showing Poliomyelitis Attack Rates (per 100,000) by Age Groups and Vaccination Status, and by Vaccination Status and Types of Poliovirus isolated, in respect of cases occurring over the two-year period from 1st January, 1961, to 31st December, 1962, were included in the previous report.

The following further tables, based on these Attack Rates, show the degree of protection provided by the Salk Poliomyelitis Vaccine in the younger age groups up to the age of 20 years, and also the relative protection provided by this vaccine against the Type 1 and the Type 3 poliovirus.

TABLE II—PROTECTION RATES OF SALK POLIOMYELITIS VACCINE BY AGE GROUPS
Attack Rates (per 100,000)

Age Group (Years)	Fully Vaccinated 3 injections	Unvaccinated No injection	Protection Rate
			Percentage
0—4	3.0	93.7	96.7
5—9	1.3	146.7	99.1
10—14	2.2	46.1	95.2
15—19	1.0	18.6	94.6
Total: 0—19	1.8	74.9	97.6
Others:			
20 and over	1.5	5.1	70.6
All ages	1.8	14.1	87.2

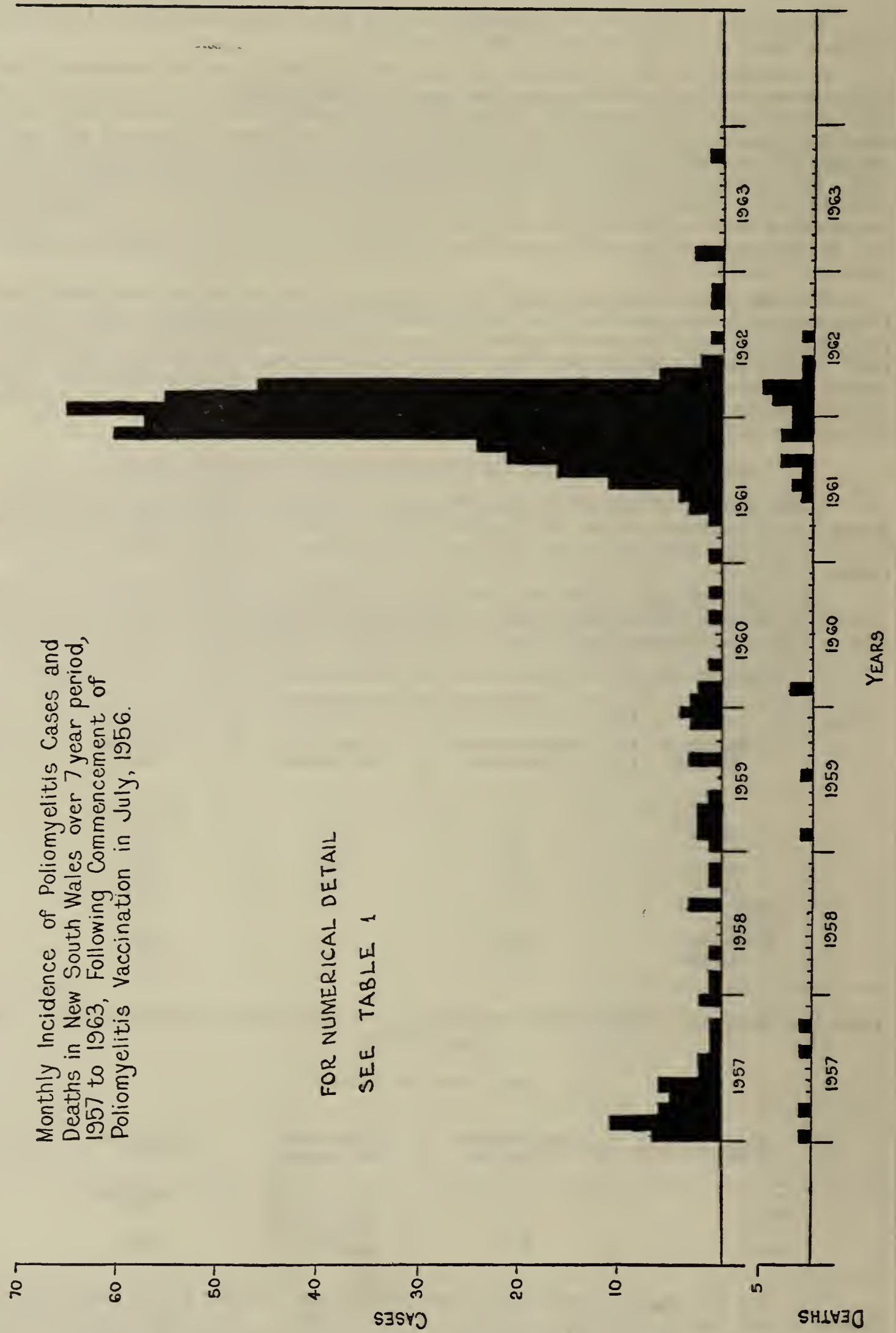
TABLE III—PROTECTION RATES OF SALK POLIOMYELITIS VACCINE AGAINST POLIOVIRUS TYPES 1 AND 3
RESPECTIVELY

Attack Rates (per 100,000)

Poliovirus Type	Fully Vaccinated 3 injections	Unvaccinated No injection	Protection Rate
			Percentage
Type 1	0.35	8.11	95.7
Type 3	0.42	1.13	62.8

The very high degree of protection shown to have been provided by the Salk Poliomyelitis Vaccine in fully vaccinated persons requires no further emphasis. It is evident, however, that the vaccine provided significantly less protection against the Type 3 poliovirus than against the Type 1. The Poliomyelitis Vaccine (Salk) prepared by the Commonwealth Serum Laboratories has since been improved by strengthening the Type 3 component.

The continued co-operation and assistance of local authorities throughout the State in carrying on the Poliomyelitis Campaign must again be acknowledged.



Leper Lazaret

REPORT ON LEPROSY IN NEW SOUTH WALES FOR THE YEAR ENDED 31st DECEMBER, 1963

On 1st January, 1963, eight (8) persons remained under detention at the Lazaret.

No deaths occurred during 1963.

The total number of persons admitted from 1883, when patients were first received (though the notification of leprosy was first made compulsory and the detention of lepers provided for by law only towards the end of 1900), to 31st December, 1963, is 245. Distributed under nationalities, the following table shows movements of patients during the year—

TABLE I—LEPROSY STATISTICS FOR NEW SOUTH WALES—1963

	Admitted	Re-admitted	Discharged	Repatriated	Died	Remaining in at 31st December, 1963
Whites of European descent—						
New South Wales	2	..	..	..	..	7
Malta	1	..	..	..	..	1
Greece .. .. .	..	..	1	..	..	..
Coloured Patients—						
New South Wales	1	..	..	..	..	2
Indian .. .. .	..	..	..	..	..	1
Totals	4	..	1	..	..	11

In Lazaret on 1st January, 1963 (4 males, 4 females)	..	..	..	8
Admitted during the year	..	..	..	2
Died during the year	..	..	..	..
Discharged	..	..	..	1
Repatriated	..	..	..	..
Re-admitted	..	..	..	2
Remaining in Lazaret on 31st December, 1963 (6 males, 5 females)	..	..	..	11

Every opportunity has been offered to members of the medical profession to visit the Lazaret for the purpose of seeing such patients as were formerly under their care, or for the study of the disease.

The following statements show the expenditure for the year, and the source from which it has been defrayed.

Statement showing the Working Expenses of the Lazaret (for men and for women) at Little Bay for the year ending 30th June, 1963—

	£	s.	d.
Salaries and Payments in the nature of salary	6,465	0	1
Provisions	1,992	3	8
Drugs and Dressings	367	4	0
Domestic utilities including Laundry expenses, furniture, etc. ..	588	19	5
Fuel, Electricity and Water	544	6	5
Renewals and Renovations	234	7	11
General Establishments	2,015	15	11
	<u>£12,207</u>	<u>17</u>	<u>5</u>

Deduct amounts received in respect of maintenance including contributions by the Commonwealth under the Hospital Benefits agreement £913 4s. 0d., net cost £11,294 13s. 5d. Average number of patients resident, 7.1 being equal to an average of £1,590 16s. 11d. per inmate per annum in 1963.

Note: The administrative jurisdiction of the Leper Lazaret has been handed over to the Hospitals Commission of New South Wales. No further Annual Reports will therefore be made in this Report.

PUBLIC HEALTH ADMINISTRATION

Government Analyst Branch—Annual Report, 1963

Government Analyst: Mr. E. S. OGG, B.Sc. (Hons.), A.R.A.C.I.

Deputy Government Analyst: Mr. W. F. FISHER, A.S.T.C., A.R.A.C.I.

The staff consisted of 20 Analysts, 2 Microbiologists, 2 Laboratory Assistants, 9 Laboratory-Assistants-in-Training, 6 Laboratory Attendants, 1 Laboratory Cleaner, 4 Trainee Analysts and 4 Office Assistants.

The number of samples examined during the year totalled 28,503, the comparative figures being tabulated below:—

Authority										Samples Examined	
										1962	1963
Pure Food Act—											
Milk	..	..	..	..	..	..	..	..	..	10,348	11,102
Meat	..	..	..	..	..	..	..	..	..	7,017	4,194
Smallgoods	..	..	..	..	..	..	..	..	..	169	103
Other Foods	..	..	..	..	..	..	..	..	..	1,277	1,073
Drugs, etc.	..	..	..	..	..	..	..	..	..	62	35
										18,873	16,507
Institutions (Hospitals, Homes, etc.)										509	398
Government Stores Department										451	377
Police Authorities										342 exhibits	144 cases
Coronial enquiries										2,287 exhibits	1,029 cases
Division of Occupational Health										320	224
Department of Prisons										48	45
Department of Labour and Industry										9	2
Miscellaneous Authorities—											
Water Samples										782	738
Sewage Samples										194	240
Other Examinations										240	182
										5,182	3,379
Bacteriological Examinations—											
Food										246	228
Water—routine										3,891	6,228
Miscellaneous										3,712	2,161
										6,849	8,617
										30,904	28,503

It will be noted that as regards specimens submitted by the Police Department and in connection with Coronial enquiries, the figures for 1963 refer to cases investigated whilst the 1962 figures refer to the total number of exhibits submitted for examination.

The routine of the Branch was considerably disturbed early in the year for a period of approximately 4 months due to an accumulation of work in the Toxicology laboratory, resulting in the diversion of a large proportion of staff from other laboratories to work in this section. This affected adversely the work of these sections, particularly the General Food, Drug and Government Stores Department Sections.

The activities of the various laboratories are dealt with briefly below:—

MILK AND MILK PRODUCTS

Milk

The number of milk samples examined during 1963 showed an increase of 5-7 per cent over those examined during the previous two years. The percentage of adulterated samples remained much the same as for 1962. Whereas samples taken from the Metropolitan area and samples submitted by the Milk Board showed a decrease in the percentage of adulterated samples, there was a rise of over 100 per cent in the percentage of adulterated samples from country areas. This sharp rise is possibly

due to the number of samples submitted from these areas during 1962 and 1963 having fallen to only 50 per cent of those submitted during 1961. With the exception of country areas samples containing added water showed a falling off in 1963. Samples deficient in fat however rose by 400 per cent in the Metropolitan area and by 200 per cent in the country areas. Particulars of samples and adulterations are shown below:—

	Year	Number of Milk Samples	Deficient in Milk Fat		Containing Added Water		Deficient in Milk Fat and containing Added water		Total Adulteration	
			No.	%	No.	%	No.	%	No.	%
Metropolitan Area	1963	4,009	19	0·47	30	0·75	2	0·05	51	1·27
	1962	3,322	4	0·12	42	1·26	6	0·18	52	1·56
	1961	3,359	10	0·30	39	1·16	2	0·06	51	1·52
Country Districts	1963	695	36	5·18	23	3·31	8	1·15	67	9·64
	1962	733	12	1·63	20	2·73	1	0·14	33	4·50
	1961	1,340	46	3·43	22	1·64	12	0·90	80	5·97
Milk Board	1963	6,414	26	0·40	46	0·72	5	0·08	77	1·20
	1962	6,234	33	0·56	71	1·14	4	0·06	108	1·76
	1961	5,650	29	0·51	52	0·92	11	0·19	92	1·63
Total	1963	11,118	81	0·73	99	0·90	15	0·13	195	1·76
	1962	10,348	49	0·47	133	1·28	11	0·10	193	1·85
	1961	10,494	85	0·81	113	1·07	25	0·24	223	2·12

Milk Products

Four hundred and thirteen samples of cream and cream mixture were examined and a survey was made of cream sold as filling in sponges and cakes. Thirty-one were adulterated, either being deficient in fat content or containing a proportion of foreign fat, or in some cases foreign fat had replaced butter fat entirely.

Two out of eight samples of butter contained foreign fat and 2 out of 21 samples of ice cream contained foreign fat.

A survey was made of powdered milks packed in sealed plastic packages. It was found in every case where the milk powder had been repacked at the place of sale that the milk powder had deteriorated and showed evidence of incipient rancidity. This did not apply to skim milk powders.

MEAT AND MEAT PRODUCTS

Meat

The total number of meat samples analysed during 1963 fell away sharply. Two factors were the cause of this. First, the use by the Food Inspection Branch of a field test using the dyestuff malachite green for the detection of preparations of sulphur dioxide in samples of meat and minced meat. The result has been that samples of meat and minced meat are submitted to the laboratory only where there is a strong presumption that the results will be positive. For instance, of 673 samples submitted from the Metropolitan area, 474 or 70 per cent showed the presence of preservative on analysis, as against 361 (14 per cent) positive samples out of 2,551 submitted in 1962. The second factor is that in the Metropolitan area only 75 per cent of the quota of samples laid down for that area was submitted during 1963, and in the Country areas only 864 samples were forwarded for analysis. This was only 24 per cent of the quota laid down for these Districts. In the Metropolitan area this was influenced no doubt by the success of the malachite green field test. In the laboratory the result has been that more time has been available for the carrying out of other analyses on the samples. Three hundred and twenty samples of sausages were found to contain fat in excess of the amount allowed by the Regulations as against 196 in 1962. This indicates only that more samples were examined for fat content during 1963.

One hundred and sixty nine samples of meat were examined in connection with supplies to Government institutions under Government Stores Department Contract. Of these, 39 contained fat in excess of that laid down in the Contract Schedule, somewhat more severe than that required by the Pure Food Act. Six samples contained excess starch, and 8 were deficient in meat content.

One hundred and three samples of smallgoods were examined, of which 4 contained excess preservative and 14 an excessive amount of starch.

OTHER FOODS

Antioxidants

A survey was made of 35 edible fats and oils for the presence of antioxidants (BHA, BHT, gallates and tocopherols). Twelve samples contained BHA and 10 tocopherol. In no instance was BHT detected. It was observed that in aged fats detection became increasingly difficult due, no doubt to chemical change brought about by slow oxidation of the compounds themselves. Further research is planned to improve the sensitivity and selectivity of the analytical methods.

Canned Fruits

Twenty-five cases of fruit were examined for drained weight. The standard for canned fruits postulates a "fill in" weight, which cannot be determined analytically. The drained weights suggest that 5 samples were in fact below standard.

Olive Oils

Only one out of eight olive oil samples examined was completely satisfactory. Arachis' oil, cottonseed oil and an unidentified foreign oil were detected in these samples. It was not possible in two or three cases to proceed with legal action though the indications were strong that adulteration was taking place. Work is in progress towards satisfactory identification of these foreign oils.

Breads

The quality of breads examined remained at a satisfactory level, and very few breaches of the Regulations were detected. These breaches included low nitrogen content in starch-reduced breads and low fibre content in brown breads. One bread sample contained an excessively high moisture content.

Foreign Matter in Food

A continued public awareness regarding foreign matter in foodstuffs is reflected in the sustained number of complaints received. In keeping with past experience, the results suggest some carelessness in various stages of the manufacture of foods. Commonly, foreign substances encountered include debris from machinery (grease, grease-flour residues, graphite) and fragments from packing materials (cardboard, labels, string, corks) apart from those indicating unclean premises or unhygienic handling of foodstuffs (rodent excreta, flies, maggots, human hairs, fragments from mould colonies).

It is not unusual to find debris arising from the storage of substances other than foodstuffs (paint, kerosene) in containers intended solely for food (milk, beer in particular). No fewer than seven cases were recorded where kerosene was sold in clearly labelled containers intended for spiritous or other liquors.

Foreign flavours were frequently investigated and are often associated with reports of alleged sickness through the ingestion of foods so affected. Generally the results prove to be negative but one instance of milk containing a high concentration of the barbiturate amytal was found.

The increasing number of complaints of this nature calling for careful and systematic examination demands a disproportionate amount of time and attention. In time, it may be necessary to introduce the use of laboratory animals in order to expedite this work.

Alcoholic Liquors

A total of 31 wine and spirit samples were examined during the year, 21 of which were adulterated. All 34 beer samples were satisfactory. Twelve samples of waste beer were received from country areas. Eight samples contained no methyl violet, and the remainder traces only, in contravention of the Pure Food Regulations.

FOOD BACTERIOLOGY

Mussels

Mussels taken from Parramatta River, Lane Cove River and Middle Harbour were examined bacteriologically. High E. coli counts were found in samples from all areas, particularly after rain. Enterococci counts were also high in these circumstances. Salmonella derby was recovered on one occasion from mussels collected near the Putney ferry in Parramatta River. Water samples from these areas were also examined in conjunction with this investigation.

Par-Cooked Sausages

An investigation was made into the keeping qualities of partially cooked sausages stored at different temperatures. Practically no change took place in the bacterial picture when the sausages were stored at 5°F, but rapid increase in numbers took place after a relatively short period of storage at 45-47°F.

Oysters

Following upon an Adelaide report of the finding of *Salmonella paratyphi A* in oysters alleged to have come from the Port Stephens area, samples of oysters from Jilligery Creek, Karuah River, and relaid oysters from Lemon Tree Passage at Port Stephens were examined. All samples showed evidence of possible faecal pollution, but no salmonella was detected.

An examination was carried out into the bacteriological condition of oysters kept at refrigerator temperatures. The level of bacteria remained virtually unchanged for 4 days and was satisfactory up to 6 days when the oysters were kept at 45°F.

An investigation is at present being carried out into the purification of contaminated oysters in tanks containing water purified by ultraviolet light.

Egg Pulp

Six samples of egg pulp were examined for salmonella with negative results.

WATER (CHEMICAL) LABORATORY

Water Supply

Routine analyses of water samples submitted by the Public Works Department in connection with town water supplies were continued during the year. In addition samples were examined in connection with proposed supplies to a number of towns including Forster-Tuncurry, Crescent Head, Coolah, Gwabegar, Wee Waa, Nambucca, Mole River, Walcha, Ivanhoe, Eucareena, Urbanville, Scott's Head, Woolgoolga, Elizabeth Bay and Corowa.

A large number of samples were received from private supplies as to suitability for drinking and domestic purposes. Water from a number of rain water storage tanks was found to be contaminated, due to animal or organic pollution gaining access to the tanks.

A number of complaints were also received with regard to aerial spraying of fertilisers and insecticidal poisons contaminating roof catchments and domestic water supplies. At present there does not appear to be any control of this source of contamination, which could lead to a real health hazard.

Sewage

Sewage-treatment is receiving more attention each year and in 1963 there was an increase of nearly 25 per cent in the number of samples submitted for examination in connection with sewage treatment.

Stream Pollution

The question of stream pollution with both domestic and industrial wastes is receiving increased attention, not only from this Department, but also from other interested bodies, such as the Water Conservation & Irrigation Commission, the Water Board, the Maritime Services Board, Fisheries Department, etc. This has placed great demands on both the chemical and bacteriological sections of the water laboratory, involving investigations of the pollution loads of streams at varying seasons of the year, and the pollution potential of various effluents.

In connection with industrial discharges investigations are often required into the concentration of specific ingredients and their degree of toxicity. This type of investigation requires special procedures and is time-consuming.

Fluoridation

Interest in fluoridation continued to increase during 1963. Fluoridation has commenced at Cooma, Condobolin and Tamworth and there are now 7 fluoridation plants in operation in New South Wales.

Three fluoridation courses of instruction were conducted during the year, attended by 28 persons either engaged or likely to be engaged in fluoridation plant operation, or connected with the policing of fluoridation.

A collaborative study into the SPADNS method for the estimation of fluoride was carried out in conjunction with the laboratories of the Departments of Agriculture and Mines and of the Metropolitan Water Sewerage & Drainage Board. As a result of this study the SPADNS method was approved for use in fluoridation plants.

At the same time the laboratories collaborated in the investigation of a method for clarifying turbid and coloured waters prior to determination of the fluoride content. The method proved satisfactory, thus permitting the fluoridation of those centres without water filtration plants.

DRUG LABORATORY

Despite the time spent by officers of this laboratory on toxicological work and the restriction on the submission of drug samples by the Government Stores Department during the period of this work, the number submitted (263) was in excess of that for the previous year.

Eight of these samples proved unsatisfactory, whilst 10 other samples were not up to standard in some particular.

Eighteen exhibits were received from the Police Department in connection with the policing of addiction drugs.

Nine samples were received from medical practitioners and hospitals.

Nineteen samples were analysed for the Food Inspection Branch.

Plastic Trick “ Foods ”

Following information as to a death overseas following an ingestion of a plastic made in imitation of food and said to have formed in the stomach sharp fragments which punctured the peritoneum, investigation was carried out on a number of such trick “ Foods ” available on the local market. Treatment with acids and with enzymes failed to produce any brittle or sharp-pointed fragments.

Form Developer

A product purporting to develop the female form was examined and found to contain the following “ active ” ingredients: caffeine, vitamin B1, calcium gluconate and methionine.

Anti-Smoking Preparations

A survey was made of anti-smoking preparations available locally. These were found in the main to be preparations containing lobeline. The amount of lobeline in these articles was in all cases considerably lower than the amount stated on the label. To some extent this was caused by losses in manufacture and storage, but could also have been due to the trade practice of referring to a rather crude extract of lobelia as “ lobeline sulphate ”.

GOVERNMENT STORES LABORATORY

Work in this laboratory was very much curtailed due to officers being seconded to other work, and was confined in the main to the analysis of lubricants, diesel fuels, soaps, detergents and disinfectants.

BIOCHEMICAL LABORATORY

Blood Alcohol

Nine hundred and sixty-eight examinations for alcohol were carried out during the year, using the Kozelka & Hine method. This number was 260 in excess of the previous year. Three hundred and sixty-nine specimens were associated with viscera exhibits submitted in connection with coronial enquiries.

Blood Cholinesterase

A satisfactory method for cholinesterase determination was worked out and 210 determinations were carried out on post mortem blood specimens. Six results were obtained under 20 ΔpH units/hour. Two being zero. One of these latter was from a case in which there was a history of Metasystox 1 having been ingested. In the other case there was no history, but subsequently analysis of the associated viscera showed the presence of parathion.

It would appear that the determination of cholinesterase activity in blood can be taken as a reliable indication of the presence or absence of a group of economic poisons and as such provides a valuable screening test. A specimen of blood should always be taken post mortem in all cases of unexplained death.

Blood (Miscellaneous)

Eighty-three specimens of blood were examined in connection with carbon monoxide poisoning, and further specimens were examined in connection with 17 cases of suspected drowning.

Trace Metals

Polarographic methods have been progressively introduced during the past year in the determination of trace metals. This has resulted in a considerable saving in the time required to complete a single examination. For instance for lead in urine a result can be obtained in 5 hours as against 36 hours by the dithizone method.

In all, 776 determinations for trace elements were carried out in 1963, distributed as follows, the figures for 1962 and 1961 being included in parenthesis:—

Lead	..	..	..	..	..	..	..	..	410	(558,660)
Arsenic	..	..	..	..	..	..	..	..	174	(184,137)
Mercury	..	..	..	..	..	..	..	..	65	(46, 34)
Thallium	..	..	..	..	..	..	..	..	19	(37, 20)
Other elements	..	..	..	..	..	..	..	..	108	(36, 21)

Biochemical

Eighty-nine biochemical specimens submitted by hospitals and medical practitioners were examined for drugs.

TOXICOLOGY SECTION

During the year 1963, 569 cases involving the post mortem analyses of human viscera and exhibits relative thereto were completed. The work was carried out in conjunction with the Police Department, city and country morgues and hospitals.

Due to the increasing number of cases investigated and the shortage of staff, the work of this section throughout the year has been mainly of a routine nature. However a certain amount of investigation into new and improved methods of analysis has been carried out and the benefit from some original research, where time has permitted, has been felt.

In view of the large proportion of deaths due to barbiturate poisoning it was thought advantageous to seek a method of identification, as accurate as the already adopted paper chromatographic method, but less time consuming. Infra red spectroscopy was tried and valuable data compiled on the twenty-five common barbiturates. This was made the subject of the paper, "Routine Infra Red Determination of Barbiturates" presented by Brown, Mahoney and Melrose at the annual meeting of the Australian Association of Clinical Biochemists. The method was found invaluable where reliable case histories were supplied and confirmation only was required. However, in the presence of impurities and mixtures of barbiturates the use was restricted.

The problem of interfering extraneous material is a general one in toxicology and when time permitted a certain amount of thought and work was given to solving this question. Firstly to assist in the work of infra red identification of barbiturates the use of Decalso "F" was experimented with and successfully applied. It is felt at this stage that by selective choice of eluting solvents of increasing polarity, a separation of individual barbiturates can be achieved thereby simplifying the problem of infra red identification.

Throughout the year the increasing use of tranquillisers of new and varied types was noted. These drugs are mainly of an acidic or neutral nature, unstable in alkali, transparent in the ultra violet region of the spectrum and generally present in milligramme amounts. These factors contribute to the problem of estimation.

As it is felt that trace amounts of these drugs may be relevant to the cause of death, an effort throughout the year has been made to formulate methods of quantitatively assessing their presence in body tissue. Nitration of the benzene ring followed by ultra violet absorbance and quantitative paper chromatography have been successfully employed. Much time has been spent in developing a general spotting reagent for these acidic drugs when applied to paper chromatography. This has been achieved with a dual spray—Diphenylcarbazone in chloroform followed by Mercuric Acetate in Acetic Acid. Chromatographic column separation using ion exchange resins prior to paper chromatography or infra red application, has also been investigated. The results of this work were reported in a paper by Brown, Mahoney and Melrose "The Estimation of Epileptic Drugs by Paper Chromatography, Infra Red and Ultra Violet Spectroscopy". This was presented at the General Meeting of the Australian Association of Clinical Biochemists in Canberra.

Towards the end of the year work was commenced on applying Thin Layer Chromatography to drugs and poisons. It is seen as a useful and time saving medium with many possibilities which this section hopes to explore in the future.

Details of the results are included in Appendix I.

The number of cases investigated again showed a marked increase on the previous year. Progressively since 1959, the number of cases examined annually have been 269, 310, 409, 514, 569. As previously mentioned this continual increase has placed great strain on the resources of the laboratory and the necessity to keep the work in this section moving has had a detrimental effect on the work in the other sections.

CRIMINAL INVESTIGATION

One hundred and forty-four investigations were carried out at the request of the Police Department, the nature of the exhibits and attendant charges being listed in Appendix II.

MISCELLANEOUS BACTERIOLOGICAL EXAMINATION

The following miscellaneous bacteriological examinations, outside the normal work of the Branch, were carried out in 1963:—

Prostatic smears for gonorrhea	..	..	..	..	..	..	1,121
Cultures for sensitivity	..	..	..	..	..	..	235
Rats for plague	..	..	..	..	..	..	805

STAFF AND ACCOMMODATION

For a brief period during the year the Branch had a full complement of analysts. However in almost all sections there is a need for increased staff, not only to carry out the essential work of the Branch, but to enable the carrying out of research and investigational work which is essential for the laboratory to continue to function at a proper level of efficiency and quality.

Accommodation still remains a problem. The urgent alterations mentioned in last year's report have still not been completed, and the situation existing, with several laboratories partially completed, is seriously impeding the work of the analysts.

EQUIPMENT

New equipment acquired during the year included a Thin-Layer Chromatography unit, a Flame Photometer and a Weiss Ring Oven apparatus.

APPENDIX I—CORONIAL ENQUIRIES

[illegible]

Fluorides	..	..	..	..	..	..	..	..	2
Fluosilicate	..	..	..	..	..	..	..	..	1
Gluthethimide	..	..	..	..	..	..	..	..	1
Hydrochloric Acid	..	..	..	..	..	..	..	..	1
Hydrofluoric Acid	..	..	..	..	..	..	..	..	1
Kerosene ..	..	..	..	..	..	..	..	..	1
Lysol ..	..	..	..	..	..	..	..	..	2
Meprobamate	..	..	..	..	..	..	..	..	2
Mercury ..	..	..	..	..	..	..	..	..	1
Methenytoin	..	..	..	..	..	..	..	..	1
Morphine	..	..	..	..	..	..	..	..	2
Organic Phosphates	..	..	..	..	..	..	..	..	8
Paint Thinner	..	..	..	..	..	..	..	..	2
Paraldehyde	..	..	..	..	..	..	..	..	2
Petrol ..	..	..	..	..	..	..	..	..	1
Phenacetin	..	..	..	..	..	..	..	..	13
Phenols ..	..	..	..	..	..	..	..	..	2
Phenothiazine (breakdown products)	..	..	..	..	..	..	..	..	20
Primidone	..	..	..	..	..	..	..	..	1
Q.E.S.	..	..	..	..	..	..	..	..	2
Quinidine	..	..	..	..	..	..	..	..	1
Sodium Hydroxide	..	..	..	..	..	..	..	..	1

APPENDIX II—CRIMINAL INVESTIGATIONS

				No. of Exhibits
Blood	..	..	19	Driving under the influence; death; culpable driving; accident.
Paint	..	..	39	Hit and run; break, enter and steal; manslaughter; receiving; false pretences; death; culpable driving.
Tablets	..	..	40	Death; possession; abortion.
Tools	..	..	8	Break, enter and steal.
Clothing	..	..	24	Indecent assault; housebreaking; manslaughter.
Miscellaneous	..	107		
			237	

Food Inspection Branch—Annual Report, 1963

STAFF

Chief Food Inspector: MR. W. J. MADGWICK.

Deputy Chief Food Inspector—MR. J. W. WING.

Five Senior Food Inspectors, 13 Food Inspectors, 1 Clerk, 1 Attendant.

- Note:* (1) Of the five Senior Food Inspectors referred to above one is detailed for duty at each of the following Health Districts—North Coast, South Coast, North Western, Western and Newcastle.
- (2) The report of the work of the Branch for 1963 does not include the work carried out in these Health Districts; this work is reported separately by the Medical Officers of Health in their respective areas.

GENERAL ACTIVITIES

The work of the Food Inspection Branch is primarily concerned with the supervision of the sale of food and drugs in regard to their composition, identity and labelling; the structure and condition of premises in which they are manufactured, prepared, stored and sold; the inspection of the equipment, appliances and vehicles used; the incidental duties associated with matters to secure the wholesomeness, cleanliness and freedom from contamination of food; and the implementation of the legal provisions required by the Pure Food Act 1908, as amended.

FOOD SAMPLING

A total number of 7,098 samples comprising a wide variety of food and drugs were submitted for analysis by the Branch Inspectors. Of these 854 were found to be adulterated and successful legal proceedings were instituted in 700 cases and an additional 154 traders received warning letters. Fines and costs imposed resulting from the sale of adulterated food was £8,270 4s. 0d. The following comments are submitted in regard to some of the food sampling work:—

Meat: Following the Chief Food Inspector's return from overseas in 1962, the use of a field test for determining the presence of sulphites in meat was recommended. The test was known as the Malachite Green Test, which relies on the decolourising of malachite green in the presence of sulphites. It has been applied over the past year to on the spot testing by Inspectors of all minced meat offered for sale. The results obtained were most effective, in that of 7,988 samples tested, only 392 showed a positive reaction. This effected a considerable saving in the cost of samples purchased and in time saved by both Inspectors and Analysts. The total number of prosecutions instituted for the sale of adulterated meat which, in addition to the presence of sulphites in meat and minced meat, includes deficiencies in meat content in sausages and excess preservatives or excess fat or starch in sausages and smallgoods, was 611. This figure is an increase of 50 over last year's total of 561 prosecutions and comprises just over half the total number of meat samples purchased in 1962. Fines and costs imposed were £1,839 in excess of the previous year.

Milk: The year under review shows a decrease in the number of samples of milk found to be adulterated. Of 2,478 samples purchased in the previous year, 122 were found to be adulterated, whilst out of a total number of 2,926 samples purchased in 1963, only 104 were found to be adulterated.

Bread: The quality of bread was found to be generally satisfactory. Of 106 samples submitted for analysis, 3 bakers were warned and one was prosecuted and fined £16.

Butter: The quality of butter was found to be satisfactory and only nine samples were submitted for analysis and all were found to be in accordance with the prescribed standard.

Cream: Of 153 samples submitted for analysis, 25 were found not to be in accordance with the requirements of the Pure Food Act. In 23 cases legal proceedings were successfully instituted against pastrycooks and other traders for selling cream filled sponges, cakes and pastries which on analysis were found to contain either an adulterated cream filling or a mock cream filling. Fines and costs imposed totalled £248 10s. 0d.

Ice Cream: Results of analysis of this product showed general compliance with the prescribed standard. Nineteen samples were purchased and two traders were convicted and fined for selling flavoured ices (a vegetable product) as ice cream.

Spirits: A substantial decrease in adulteration of spirits over the previous year and other years will be observed in 1963. There were 10 adulterated spirit samples obtained from a total of 1,665 on the spot samples tested in hotels by the Branch's Inspectors. There were 13 successful prosecutions for the sale of adulterated or falsely described spirits three of which had been pending from the previous year. Fines and costs imposed totalled £83 5s. 0d.

BACTERIOLOGICAL EXAMINATION OF FOODS

A total of 104 samples of food were submitted for bacteriological examinations which included 45 samples of oysters; 37 samples of desiccated coconut; and 12 samples of sausages.

The oyster samples were examined to determine whether they had been polluted by the waters in the area in which they were grown and/or in subsequent handling procedures. Although no pathogenic organisms were found in any of the samples examined, some of the oysters showed gross contamination as a result of which the Department considered legislation to require the depuration of all oysters by subjecting them, whilst in the shell after harvesting, to ultra violet light treatment in holding tanks for a period of 48 hours.

The samples of desiccated coconut were examined to determine whether they complied with the provisions of the Regulations which require that desiccated coconut shall be free from pathogenic organisms. No pathogenic organisms were found in any of the samples examined.

Twelve sausage samples, vacuum packed in a new type of pack and pre-cooked, were submitted which were tested in the laboratory. One pack was examined immediately on receipt, five were stored in a domestic type refrigerator at a temperature between 45° and 47°F; and the remaining six were stored in a deep freeze at 5°F. Storage periods ranged from 7 to 35 days. The results showed that pre-cooked and frozen food can be kept only for a very short time in a domestic type refrigerator and whilst no bacterial proliferation occurred in the deep freeze, organisms present in the original article remained viable.

SEIZURES

The quantity of food and drugs seized and destroyed as being unfit for human consumption comprised more than 29 tons; 12,516 head of poultry; and 2,271 cartons, bottles and tins.

PREMISES

Again during 1963, the total number of premises inspected in which food and drugs were prepared, stored and sold, which required remedial action in the way of structural repairs and other defects, showed a decrease over last year and other recent years. Of 9,108 premises inspected; 257 notices were served on traders to remedy defects found in connection with their premises; and 23 traders were convicted and fined a total of £607 5s. 0d. for failing to keep their premises clean.

GENERAL BREACHES

Traders found smoking whilst engaged in the preparation or service of food formed the greatest number of offenders in this field of the Branch's activities and a total of 99 persons were successfully prosecuted for this offence, fines and costs totalling £791; while 41 traders were prosecuted for exposing food to dust and other forms of contamination and these traders were fined a total of £333. The number of traders prosecuted for failing to keep their premises free from cockroaches was greater than in previous years, and 23 such cases were prosecuted with fines and costs totalling £374.

The sale of meat for animals from butchers shops resulted in eight butchers appearing in Court on this charge who were fined a total of £67; whilst 7 delicatessen proprietors were fined a total of £42 for illegally selling butchers meat.

Two traders were prosecuted for obstructing Inspectors and one trader was fined for assaulting an Inspector. In all they were fined a total of £71 13s. 0d. Other breaches in a total of 203 prosecutions instituted were for improper food wrapping; unclean utensils; fly infested premises; selling unlabelled bottled oysters; and for storing food in a bedroom.

COMPLAINTS

Complaints from members of the public continue to receive attention by the Branch's Inspectors and these numbered 957 during 1963.

LEGAL PROCEEDINGS

The total number of prosecutions instituted by the Branch during the year was 929 and fines and costs amounted to £10,834 12s. 0d.

INSPECTION OF MENTAL HOSPITALS, CHILD WELFARE AND PRISON DEPARTMENT ESTABLISHMENTS

Advice on pure food matters was given by means of inspections and reports by the Branch Inspectors to Mental Hospitals in 24 instances and to Child Welfare and Prison Establishments in 45 instances during 1963.

PUBLIC RELATIONS

The Chief Food Inspector continued his weekly participation in Radio 2GB's session "I'm on your side", in which listeners' and food traders' problems were discussed on the air.

The Chief Food Inspector also contributed seven articles to health and food industry journals and addressed 12 health, food industry and service organisations.

AMENDMENTS TO REGULATIONS

Amendments to Regulations were gazetted during the year in regard to the following matters:—
canned meat balls; hamburger and rissoles; canned fish balls and fish rissoles; jelly crystals; tablets, cubes and mixes; and permitted colouring matters in food.

COMMITTEES AND STAFF CONFERENCES

The Chief Food Inspector is a member of the following Committees and he attended meetings of each during the year:—

- Food Standards Committee of National Health and Medical Research Council.
- Baking Trades Advisory Committee.
- Pesticides Committee of the Standards Association of Australia.
- New South Wales Health Week Council.
- New South Wales Pure Food Advisory Committee.

The Chief Food Inspector held two staff conferences with Senior Food Inspectors in Sydney and made visits to the South Coast Health District; Western Health District; Newcastle Health District; and twice to North Western Health District.

SUMMARY OF WORK PERFORMED IN 1963

A summary of the work performed by the Branch for the year 1963 is shown in following Tables 1 and 2.

TABLE 1—SUMMARY OF WORK PERFORMED BY PURE FOOD BRANCH FOR YEAR ENDING 31ST DECEMBER, 1963

<i>Food and Drugs—Other than Milk</i>						
Number of Samples taken	..	..	..	..	..	4,172
Number below Standard	..	..	..	..	..	781
Number of Warnings	..	..	..	..	..	123
Number of Prosecutions	..	..	..	..	..	658
Amount of Fines and Costs	..	..	..	..	..	£8,024 4s. 0d.

<i>Milk</i>						
Number of Samples taken	..	..	..	..	..	2,926
Number below Standard	..	..	..	..	..	73
Number of Warnings	..	..	..	..	..	31
Number of Prosecutions	..	..	..	..	..	42
Amount of Fines and Costs	..	..	..	..	..	£246 0s. 0d.

Food and Drugs Unfit for Human Consumption, Seized and Destroyed

The seizures and destructions comprised over 29 tons and 12,516 head of poultry, and 2,271 cartons, bottles and tins.

Inspection of Premises Used for the Preparation, Sale and Storage of Food and Drugs

Number of Inspections	..	..	..	..	..	9,108
Number of Warning Notices	..	..	..	..	..	257
Number of Prosecutions for Unclean Premises	..	..	..	..	..	23
Amount of Fines and Costs	..	..	..	..	..	£607 5s. 0d.

Particulars of General Breaches of the Pure Food Act and Regulations

Number of Prosecutions	..	..	..	..	..	203
Amount of Fines and Costs	..	..	..	..	..	£1,914 3s. 0d.

Action Taken Under Other Acts—Local Government Act, Ordinance 39

Number of Prosecutions	..	..	..	..	..	3
Amount of Fines and Costs	..	..	..	..	..	£43 0s. 0d.

Other Matters

Number of Complaints Investigated	..	..	..	..	..	957
Inspections of Mental Hospitals	..	..	..	..	..	24
Inspections of Child Welfare and Prison Department Establishments	..	..	..	..	..	45

TABLE 2—SUMMARY OF LEGAL PROCEEDINGS, 1963

								Number of Prosecutions	Amount of Fines and Costs
									£ s. d.
Offences under the Pure Food Act and Regulations—									
Adulterated Milk	..	..	..	..	..	..	..	42	246 0 0
Adulterated Foods and Drugs	..	..	..	..	..	..	..	658	8,024 4 0
Unclean Premises	..	..	..	..	..	..	..	23	607 5 0
General Breaches	..	..	..	..	..	..	..	203	1,914 3 0
Other Acts—									
Local Government Act	..	..	..	..	..	..	..	3	43 0 0
Grand Total	..	..	..	..	..	..	..	929	10,834 12 0

TABLE 3—SUMMARY OF WORK CARRIED OUT BY THE PURE FOOD BRANCH UNDER THE PURE FOOD ACT, 1908, AS AMENDED, FROM THE DATE OF ITS OPERATION, OCTOBER, 1909, TO 31ST DECEMBER, 1963

						No. of Premises Inspected	Total No. Samples Taken	Total Below Standard	Prosecutions	Amount of Fines and Costs
										£ s. d.
Premises Inspected	..	..	..	..	..	501,491	....	....	3,243	24,052 12 0
Breaches of Act and Regulations	..	..	..	..	..	....	....	....	5,894	31,279 2 6
Milk Samples	..	..	..	..	..	....	400,491	13,478	8,812	45,936 8 0
Food and Drug Samples	..	..	..	..	..	....	267,245	22,838	16,779	91,093 5 10
Food and Drug Seizures	..	..	..	..	..	....	....	....	435	2,044 11 0
Total	..	..	..	..	..	501,491	667,736	36,316	35,163	194,405 19 4

Health Inspection Branch—Annual Report, 1963

STAFF

As at 31st December, 1963, the Branch establishment at Head Office comprised:—

Chief Health Inspector—MR. D. H. WAY, F.I.H.S.

Deputy Chief Inspector—MR. H. K. EVANS; Two Senior Health Inspectors; 18 Health Inspectors—(10 vacant positions); 2 Cadet Health Inspectors—(1 vacancy); 2 Registered Surveyors; 1 Senior Tracer (female); 2 Junior Clerks; 1 Records Attendant.

In addition to the staff at Head Office, five Senior Health Inspectors and nine Health Inspectors were seconded for duty in the established decentralised Health Districts. Approval was granted during 1963, for the recruitment of an additional Inspector in both the North Coast and South Coast Health Districts.

STAFF CHANGES

Chief Health Inspector K. R. Horne retired on 21st February, 1963, after thirty-four years service in the Department.

Approval was given in 1963 for the creation of positions for two Senior Health Inspectors and an additional eight Health Inspectors at Head Office. The Senior positions were filled by Inspectors from the North Coast and South Coast Health Districts, and replacements were provided in these areas from Head Office staff.

DECENTRALISATION

No new Health Districts were created during the year. Pending the establishment of the Riverina Health District, both that area and Broken Hill Health District were administered from Head Office.

FUNCTIONS AND RESPONSIBILITIES

Matters arising from the administration of the following Acts are inspected and reported upon by Officers of the Branch:—

Public Health Act, 1902, as amended and Regulations.
Noxious Trades Act, 1902, as amended and Regulations.
Local Government Act, 1902, as amended and Regulations.
Fluoridation of Public Water Supplies Act, 1957, and Regulations.

ACTIVITIES

The work includes:—investigation of outbreaks of infectious disease; sanitary surveys; investigation of complaints of nuisance caused by drainage; insanitary buildings; rodent infestation; inspection of sanitary depots; sewage treatment works; water supplies; septic tank sites and inspection of noxious trades premises. Because of limited staff and resultant pressure of routine work the activities of the Branch were confined mainly to the Metropolitan area except for essential work in the Riverina area. Septic tank inspections increased in number and were more exacting in nature because of the difficult sites now being used for buildings. Inspections of Departmental Institutions, investigation of stream and beach pollution progressed as time permitted.

UNHEALTHY BUILDING LAND

The provisions of Sections 54 and 55 of the Public Health Act concerning unhealthy building land are carried out with the aid of a Survey Section. The volume of work in this field is increasing with the upward swing in sales of land. Solicitors' enquiries reached a total of 69,706. Six new areas were notified as unsuitable for building purposes, and following satisfactory compliance with Departmental requirements, the notifications of three old areas were revoked.

CONFERENCES

Three Conferences attended by the Chief Health Inspector, Deputy Chief Health Inspector and Senior Health Inspectors were held at Head Office during the year to discuss current problems and trends in Health Inspection work, and to maintain uniformity in regard to policy matters. These Conferences served a very useful purpose.

STAFF TRAINING

Short Courses in Water Fluoridation Practice and Court Procedure were held in Sydney. These schools supplied a long-felt need for practical training in fields not adequately covered by the Health Inspectors Certificate Course.

ROUTINE WORK

In the year under review, the following work was carried out. These figures are supplementary to those shown in the report of the Metropolitan Health District:—

Sanitary Surveys (Towns)	16
Shops and Buildings	141
Hospitals, Institutions and Schools	50
Hotels, Public Halls and Theatres	66
Slaughtering premises and abattoirs	20
Camping Areas, Showgrounds and Cemeteries	16
Saleyards	11
Swimming Pools	3
Sanitary Depots—proposed sites	16
existing	53
Septic tank applications—recommended for approval	1,219
Septic tank applications—recommended for refusal	4
Septic tank Manufacturers design plans examined	82
Sewage treatment works inspected	6
Nuisance complaints investigation	14
Water supplies investigated	9
Water samples collected	21
Dairies inspected	7
Noxious trades premises inspected	47
Rivers and beach pollution	4
Unhealthy building land inspections	189
surveys	232
Enquiries from solicitors re land	69,706
Searches re land	744
Investigation mass installation of septic tanks	8
Branch records—new registrations	10,735

Private Hospitals and Rest Homes Branch—Annual Report, 1963

STAFF

Medical Officer—DR. R. Y. DUNLOP, M.D., B.Ch., D.P.H., D.T.M. & H.

Three Supervisory Nursing Sisters.

One Office Assistant.

ACTIVITIES

The Officers of the Branch were responsible during 1963, for the inspection of all licensed Private Hospitals and Rest Homes in the Metropolitan area. While the greater number of the inspections were carried out by the Supervisory Nursing Sisters the Medical Officer again accompanied the Sisters frequently, during the year, and approximately 85 premises were thus jointly inspected. Joint inspections were made where premises fell short of desired standards and the results of notices served on licensees, following these joint inspections, has been more gratifying in 1963 than in 1962, and some of the improvements effected to premises during the year have been remarkable.

Stress has been laid in 1963, on adequate quarters with sanitary facilities for Resident Managers; the provision of ceiling screens in new premises for all wards over two beds; the provision of adequate sitting-room accommodation for patients; the provision of adequate bathing and sanitary facilities; and the provision of adequate and modern fire fighting equipment including properly positioned fire escapes. Co-operation with the Officers of the Board of Fire Commissioners has been responsible for a great improvement in the last of these very necessary requirements and all new plans are now scrutinized by the Officers of the Board prior to their submission to the Board of Health for approval. Further, the Officers of the Board of Fire Commissioners, following requests by the Branch, are now inspecting Private Hospitals and Rest Homes with a view to ascertaining whether fire hazards exist in certain premises. Recommendations have been sent to Licensees who have been most co-operative in complying with the requirements.

Additionally during the year, the staff have scrutinized 208 (162) plans; checked on the registration of 318 (250) Resident Managers; amended 115 (79) licenses; transferred 47 (25) licenses; prepared 42 (36) new licenses, making the total number of minutes prepared for the Board of Health 734 (552). (The figures in parenthesis are those of 1962).

The Supervisory Nursing Sisters carried out the following work, in connection with their routine outdoor duties during 1963. Figures for 1962 are given for comparison.

TABLE 1—ROUTINE OUTDOOR DUTIES—SUPERVISORY NURSING SISTERS

	1962	1963
Routine inspections of Private Hospitals.. ..	283	226
Routine inspections of Rest Homes	466	498
Initial inspections of Private Hospitals and Rest Homes ..	58	47
Final inspections of Private Hospitals and Rest Homes ..	30	27
Special visits	84	90
Complaints investigated	26	32

Complaints during 1963 have been varied but they have not always been substantiated and, out of a total of 32 complaints, only 15 were found to be justified while 90 per cent of these were connected with the quality and quantity of food and nursing attention. In all such instances improvements have been effected.

At the end of the year the total number of Private Hospitals in the State was 205 compared with 210 in 1962. This decrease of five was due to Licensees converting Private Hospitals to Rest Homes while one Private Hospital closed in the Metropolitan area. The number of Rest Homes in the State was 322 in 1963, compared with 276 in 1962. Allowing for the four Private Hospitals which were converted to Rest Homes new Rest Homes licensed totalled 42.

From the tables below it will be observed that during 1963 the overall number of Private Hospital beds and cots in the State increased by 324 and 58 respectively; while Rest Home beds increased by 1,098; but cots in Rest Homes were fewer by nine.

The increase in Private Hospital beds occurred in the Metropolitan area and totalled 343 while there were 19 fewer beds in the country areas. Cots increased in both areas by 37 and 21 respectively.

The increase in Rest Home beds occurred in both Metropolitan and Country areas and totalled 883 and 215 respectively. The decrease in 9 cots occurred in the Metropolitan area.

The points scheme which commenced in 1962 was continued in 1963 and the figures for the two years are given below.

TABLE II—POINTS SCHEME FOR PRIVATE HOSPITALS AND REST HOMES—METROPOLITAN AREA

Rating						Private Hospitals		Rest Homes	
						1962	1963	1962	1963
Three stars .. ..	..	..	..	..	..	90	120	116	167
Two stars .. ..	..	..	..	..	..	42	25	94	95
One star .. ..	..	..	..	..	..	17	5	37	16
Nil .. ..	..	..	..	..	..	..	..	..	..

The number of Private Hospitals that improved during 1963 from one star to two stars was four.

The number of Private Hospitals that improved during 1963 from two stars to three stars was nineteen.

The number of Rest Homes that improved during 1963 from one star to two stars was twenty-nine.

The number of Rest Homes that improved during 1963 from two stars to three stars was thirty-six.

One Private Hospital and one Rest Home closed during the year because the Licensee was unwilling to comply with the Board of Health requirements.

TABLE 3—NEW SOUTH WALES—PRIVATE HOSPITALS: NUMBER OF HOSPITALS

Year	District	Hospitals									
		M.S. & L.	M. & S.	L.	M. & P.-O.	M.	P.	M. & L.	M. P.-O. & L.	M.S. & P.-O.	Total
1962	Sydney	19	35	2	84	4	2	1	1	1	149
	Country	17	9	7	14	3	1	4	4	2	61
	Total—N.S.W. ..	36	44	9	98	7	3	5	5	3	210
1963	Sydney	18	34	3	87	2	2	1	1	2	150
	Country	15	10	4	13	3	1	3	4	2	55
	Total—N.S.W. ..	33	44	7	100	5	3	4	5	4	205

- M.S. & L. = Medical, Surgical and Lying-in.

M. & S. = Medical and Surgical.

L. = Lying-in.

M. & P.-O. = Medical and Post-Operative.
- M. = Medical.

P. = Psychiatric.

M. & L. = Medical and Lying-in.

M. P.-O. & L. = Medical, Post-operative and Lying-in.

M. S. & P.-O. = Medical, Surgical and Post-operative.

TABLE 4—NEW SOUTH WALES—PRIVATE HOSPITALS: NUMBER OF BEDS

Year	District	M. S. & L.	M. & S.	L.	M. & P.-O.	M.	P.	M. & L.	M. P.-O. & L.	M. S. & P.-O.	Total
1962	Sydney	674 + 19 cots	1,028 + 22 cots	16	1,745 + 90 cots	78 + 2 cots	59	12	5	..	3,617 + 133 cots
	Country	139 + 17 cots	171 + 12 cots	53	165 + 28 cots	62 + 23 cots	.. 18 cots	22	30	36	678 + 98 cots
	Total—N.S.W. ..	813 + 36 cots	1,199 + 34 cots	69	1,910 + 118 cots	140 + 25 cots	59 + 18 cots	34	35	36	4,295 + 231 cots
1963	Sydney	754 + 19 cots	1,152 + 22 cots	15	1,917 + 92 cots	30	59	12	5	16	3,960 + 133 cots
	Country	160 + 21 cots	142 + 7 cots	40	196 + 28 cots	61 + 27 cots	.. 33 cots	9	38	13 + 3 cots	659 + 119 cots
	Total—N.S.W. ..	914 + 40 cots	1,294 + 29 cots	55	2,113 + 120 cots	91 + 27 cots	59 + 33 cots	21	43	29 + 3 cots	4,619 + 252 cots

TABLE 5—NEW SOUTH WALES—PRIVATE HOSPITALS

(Showing Classification of Private Hospitals Licensed at December 31st with respect to Size, as signified by Number of Beds available.)

Year	District	Beds							
		1	2	3	4-5	6-10	11-20	Over 20	Total
1962 ..	Sydney and Districts ..	1	1	..	3	18	58	68	149
	Country Districts ..	6	2	1	5	21	19	7	61
	Totals ..	7	3	1	8	39	77	75	210
1963 ..	Sydney and Districts ..	1	1	1	1	17	50	79	150
	Country Districts ..	6	1	..	6	12	19	11	55
	Totals ..	7	2	1	7	29	69	90	205

TABLE 6—NEW SOUTH WALES—REST HOMES—NUMBERS OF REST HOMES AND BEDS

Year	District	Rest Homes				Number of Beds			
		General	After-care	Psychiatric	Total	General	After-care	Psychiatric	Total
1962 ..	Sydney	239	....	3	242	5,607	....	59	5,666
	Country	29	....	....	29	+ 32 cots 676	....	....	+ 58 cots 676
	Total—N.S.W. ..	268	....	3	271	6,283 + 32 cots	....	59	6,342 + 58 cots
1962 ..	Interim licenses—								
	Sydney	5	....	....	5	57	....	....	57
	Country .. ..	....	....	....	....	....	....	....	....
	Total—N.S.W. ..	5	....	....	5	57	....	....	57
1963 ..	Sydney	272	....	3	275	6,440	....	91	6,531
	Country	42	....	....	42	+ 49 cots 864	....	....	+ 49 cots 864
	Total—N.S.W. ..	314	....	3	317	7,304 + 49 cots	....	91	7,395 + 49 cots
1963 ..	Interim licenses—								
	Sydney	3	....	....	3	75	....	....	75
	Country	2	....	....	2	27	....	....	27
	Total—N.S.W. ..	5	....	....	5	102	....	....	102

TABLE 7—NEW SOUTH WALES—REST HOMES

(Showing Classification of Rest Homes Licensed at December 31st, with respect to Size, as signified by Number of Beds Available)

Year	Beds		1	2	3	4-5	6-10	11-20	Over 20	Total
1962	..	Sydney and Districts	..	..	..	5	39	105	93	242
		Country Districts	..	..	..	1	4	16	10	31
		Totals	..	..	..	6	43	121	103	273
1962	..	Interim Licenses —								
		Sydney and Districts	..	..	..	1	1	3	..	5
		Country Districts	..	..	..	..	..	..	..	..
		Totals	..	..	..	1	1	3	..	5
1963	...	Sydney and Districts	..	..	..	2	36	109	133	280
		Country Districts	..	..	..	1	4	22	13	40
		Totals	..	..	..	3	40	131	146	320
1963	..	Interim Licenses —								
		Sydney and Districts	..	..	..	..	2	..	..	2
		Country Districts	..	..	..	..	..	..	..	..
		Totals	..	..	..	..	2	..	..	2

TABLE 8—NEW SOUTH WALES—PRIVATE HOSPITALS AND REST HOMES

(Numbers of Licensed Private Hospitals and Rest Homes in each year over Twenty-year Period from 1941 to 1963.)

Year				Private Hospitals	Rest Homes
1941	..	..	..	496	....
1942	..	..	..	462	....
1943	..	..	..	433	....
1944	..	..	..	388	....
1945	..	..	..	364	....
1946	..	..	..	348	....
1947	..	..	..	310	....
1948	..	..	..	303	....
1949	..	..	..	262	....
1950	..	..	..	229	....
1951	..	..	..	196	....
1952	..	..	..	180	....
1953	..	..	..	172	....
1954	..	..	..	171	....
1955	..	..	..	188	220
1956	..	..	..	175	222
1957	..	..	..	180	223
1958	..	..	..	184	232
1959	..	..	..	198	233
1960	..	..	..	201	251
1961	..	..	..	208	262
1962	..	..	..	210	280
1963	..	..	..	205	322

Division of Forensic Medicine—Government Medical Officer for Sydney

Annual Report, 1963

This year was marked by a complete revision of the role and the establishment of the Division which now concentrates exclusively on forensic duties. During the month of June, 1963, the following changes took place:—

- (1) Medical examinations of staff on behalf of various Departments, travel concessions and smallpox vaccinations were transferred, along with Dr. Waddy to the Medical Examination Centre.
- (2) The Division ceased to be responsible for the medical examinations of the N.S.W. Police Force and the Director of Division of Forensic Medicine relinquished the title of Police Surgeon. All these examinations are now performed by Dr. Barry who has been removed from the Divisional establishment and seconded full time to the Police Department.
- (3) The control of the Hospital Admission Depot passed from this Division to the Division of Epidemiology.
- (4) The administration of the City Morgue was transferred from the Justice Department to the Department of Public Health. The Division of Forensic Medicine is now responsible for the care and maintenance of the City Morgue, and the morgue assistants have been added to its establishment.

STAFF PRIOR TO JUNE, 1963

Director, Division of Forensic Medicine and Government Medical Officer; Dr. JOHN LAING, M.B., B.S.

Medical and Medico-Legal Section: Five medical officers.

Medico-Legal Laboratory; One Medical Officer, One Microbiologist, One Laboratory Assistant-in-Training, One Office Assistant.

Hospital Admission Depot: The Officer in Charge, The Assistant Officer, The Night Officer, The Relieving Night Officer, Escort Attendants (from Lidcombe State Hospital).

DETAILS OF ACTIVITIES RELINQUISHED IN JUNE, 1963

Admissions to Hospitals and Homes

During the period January to June, 1963, the following admissions were arranged:—

Metropolitan Hospitals	..	..	..	..	..	..	..	833
State Hospitals and Homes and Chronic Hospitals	..	..	..	..	..	..	..	1,523
Convalescent Homes	..	..	..	..	..	..	..	270

Medical Examinations

One thousand four hundred and fifty-six examinations were performed for the Police Department and one thousand five hundred and eighty-nine for various other Government Departments.

Supervision of the health of the Police Force was maintained at the daily sick parade at Police Headquarters. The average daily number of Police on sick report was 147, the strength of the Metropolitan District being 3,939.

Other Medical Services

Eight hundred and fifty vaccinations against smallpox were performed and one thousand three hundred and seventy-eight International Certificates were issued for these and for vaccinations done by private medical practitioners.

One hundred and seventy-nine throat swabbings were taken from children about to be admitted to various institutions.

A further analysis of the above activities is presented in Table I. As all the figures of the above activities are on a six months basis only, they are not directly comparable with the previous year's figures. The general impression is that during these six months there was a lessened demand for admission of acute and chronic hospital cases and for smallpox vaccination. The number of Police and Departmental examinations appeared to remain at about the same level as in 1962.

TABLE I

	Six months to 30th June, 1963						
<i>Admissions to Hospitals and Homes—</i>							
Metropolitan Hospitals	833
State Hospitals and Homes, Chronic Hospitals	1,523
Convalescent Homes	270
<i>Medical Examinations for Various Government Departments</i>	1,589
<i>Medical Examinations for the Police Department—</i>							
Police Recruits—First Examinations	685
Police Recruits—Re-examinations	417
Probationary Constables—Confirmations of Appointments	215
Periodic examination of cadets	123
Shallow Water Divers—Annual Fitness Examinations	16
Daily average of Police on sick report	147
<i>Vaccinations and International Certificates—</i>							
Vaccinations (Smallpox)	850
International Certificates	1,378
<i>Throat Swabbings</i>	179

Following the changes that took place in June, 1963, the establishment and role of the Division is now as follows:—

- Director, Division of Forensic Medicine and Government Medical Officer: Dr. JOHN LAING, M.B., B.S.
- Medico-Legal Section: Three Medical Officers, Five Permanent Morgue Assistants, One casual Morgue Assistant.
- Medico-Legal Laboratory: One Medical Officer, One Microbiologist, One Laboratory Assistant-in-Training, One Laboratory Attendant, One Office Assistant.

ACTIVITIES

1. Medico-Legal Section

This section performs autopsies upon all bodies coming under the jurisdiction of the City Coroner. It works in close co-operation with the Metropolitan Police Force and is available to visit scenes of crime when requested. It undertakes post graduate training and demonstrations in Forensic matters to interested medical practitioners. The section undertakes the medical investigation of all aircraft fatalities in New South Wales on behalf of the Department of Civil Aviation, visiting the scene of the accident wherever it may be and performing the requisite autopsies. It gives advice and assistance to Country Coroners and medical practitioners throughout the State. The section also undertakes the examination of cases of criminal assault for the Police Department. The medical staff is required to give evidence in various courts in connection with this work.

The above services are available day and night all the year round.

Table II gives a comparison of these activities for the years 1962 and 1963, and shows the same gradual increase that has been experienced over the years. It is to be noted that whereas in 1954, full autopsies were performed on approximately 49 per cent of the yearly total of bodies admitted to the City Morgue, the figure now stands at 78 per cent, indicating that although the annual total of bodies has only climbed slowly, much more autopsy work has been entailed.

TABLE II

	Year ending 31st December, 1962	Year ending 31st December, 1963
Autopsies for City and Country Coroners (including weekends)	2,210	2,237
Examination of Criminal Assault Cases	178	182

2. Medico-Legal Laboratory

The laboratory continues to provide pathological and biological services to assist in the investigation of crimes and in the determination of causes of death in cases for various Coroners. The work includes histopathology, the grouping of blood and secretions, the investigation of blood stains and seminal stains and the examination of hairs and fibres. These services are available for both metropolitan and country cases.

A detailed analysis of the specimens submitted and the number of examinations performed is given in Table III. This shows a marked increase, particularly in histopathological examinations partly due to the closer integration of the Medico-Legal Laboratory with the City Morgue but mainly due to the increasing demand by organisations, such as Teaching Hospitals, and committees with special interests, for more histopathological detail than has been available in the past. There is also an increasing awareness by country practitioners of the availability of the services. The total number of specimens submitted shows an increase of 655 over the 1962 total and the number of tests performed in the Medico-Legal laboratory shows an increase of 2,213 over the 1962 total. This reflects an increasing requirement for more extensive investigation of the specimens submitted.

SPECIAL FEATURES OF THE YEAR’S ACTIVITIES

The year commenced with a well-publicised double fatality which, despite intensive and varied investigations, has so far remained unsolved.

An internal survey of methods at the City Morgue was continued in order to provide much more time and opportunity for the medical staff to engage in more detailed technical investigation. Changes in the types of forms, in filing of records and the use of tape recorders and copying machines have all been gradually introduced during the year and it is expected that the new office system will be fully operational at the beginning of 1964.

During the year, eight aircraft accidents were investigated in conjunction with Department of Civil Aviation resulting in the performance of sixteen autopsies at various country centres. Public relations activities were continued in the form of talks to Hospital Staffs and other professional groups. A refresher course in forensic medicine was conducted at Bathurst in December of this year and further courses are planned for various country centres under the auspices of the Medical Officers of Health.

The training of post graduate students continues at the City Morgue and staff from the Teaching Hospitals continue to attend autopsies of special interest to them.

TABLE III—ACTIVITIES OF THE MEDICO-LEGAL LABORATORY TO 31ST DECEMBER, 1963

	Number of Specimens Submitted					Number of Tests Performed						
	Police	Morgue	Ana- lyst	Misc.	Total		Police	Morgue	Ana- lyst	Misc.	Total	
					Year ending 31 December, 1962	Year ending 31 December, 1963					Year ending 31 December, 1962	Year ending 31 December, 1963
Whole blood for grouping ..	60	31	..	..	72	91	185	119	..	..	280	304
Garments, weapons, etc., for grouping of blood stains and determination of origin of blood ..	332	6	..	1	283	339	902	5	..	1	681	908
Vaginal smears for spermatozoa ..	52	43	..	3	104	98	53	45	..	3	108	101
Garments, etc., for the detection of seminal stains ..	287	4	..	..	363	291	382	4	..	..	519	386
Specimens of hair ..	103	36	..	..	136	139	1,109	68	..	..	1,030	1,177
Post mortem tissues for histopathological examination	308	2,400	13	9	2,075	2,730	558	4,410	19	15	3,047	5,002
	1,142	2,520	13	13	3,033	3,688	3,189	4,651	19	19	5,665	7,878

Publicity Branch—Annual Report, 1963

STAFF

Publicity Officer—Mr. G. A. KEEP.
One Assistant Publicity Officer, one clerk, one office assistant, one projectionist.

ACTIVITIES

The functions of the Branch are to promote health education and public relations programmes, using all media, involving press, radio, television, films, posters, pamphlets and displays.
The Branch’s film library was used extensively by schools, Teachers Colleges and teaching hospitals, whilst much of the material issued such as posters, and pamphlets, was distributed to these locations for teaching purposes.

A heavy demand was again placed upon the Branch by Councils for all types of publicity material.

Local Authorities and schools received the main bulk of the following supplies from this Branch during 1963 (approximate figures).

Posters	..	..	..	..	..	..	..	..	..	32,000
Pamphlets		..	..	..	..	..	..	..	853,300	
Booklets		..	..	..	..	..	..	..	192,500	
									—————	1,045,800

A large quantity of booklets and leaflets were also sent direct to schools and Baby Health Centres by the Government Printer, including 60,000 *Our Babies* and 80,000 *Healthy Motherhood*.

Medical Record Cards, Polio (Adult) and Polio (Children) cards distribution figures amounted to approximately 50,200, 82,000 and 115,000 respectively.

One hundred and ninety-three 16 mm. film screenings were carried out by the Branch to a total audience of 5,840. Film loans (16 mm.) totalled 2,071 (35 mm.) 21. These were screened to audiences of 51,745 and 9,260 respectively.

Other details of the Branch’s work during 1963 included:—

- (a) *Press:* Tuberculosis surveys accounted for most of the paid advertising used this year. All metropolitan, suburban and country papers were supplied with two press articles weekly, every opportunity being taken to provide the press with articles of a topical nature.
- (b) *Radio:* Paid announcements over commercial radio stations were used in connection with the Department’s chest x-ray survey campaign. Two articles per week were sent to all radio stations for broadcasting and Departmental staff frequently made broadcasts on general health subjects.
- (c) *Television:* Paid television was used to publicise the Department’s Chest X-ray Survey Publicity Campaign.

Health Week, 1963

The Week is organised by this Branch, the Publicity Officer acting as Secretary. The theme of National Health Week 1963 was “ 175 Years of Progress in Health ” with the slogan “ Advance Australia’s Health ”.

Emphasis was placed on the numerous health services provided for prevention of sickness and their fuller use encouraged. The need for continued observance of personal and communal hygiene was stressed. Two essay competitions were held in which primary and secondary school children were invited to compete. Health educational material, notes for radio talks and newspaper articles were also distributed.

An innovation during Health Week was the publication of 70,000 copies of a Health Week Newspaper. Distributed in the metropolitan area and Newcastle district, this proved to be most successful.

For the first time during the campaign 100,000 copies of a special Health Week pamphlet were issued.

The Branch again arranged an exhibit at the Health Week Exhibition in the Sydney Town Hall.

Voluntary Organisations

The Branch works as closely as possible with the many voluntary organisations operating in the field of public health and endeavours to assist these groups by personal liaison, film screenings, supply of health education material and expert advice.

During the year the Branch co-operated with these groups on a wide variety of projects.

A Departmental Exhibit was arranged at the Town Hall in November during Old People’s Week, which was conducted by the Old People’s Welfare Council.

The Branch also arranged an Exhibit for the Department at the Australian College of General Practitioners’ Convention during October at Randwick.

Royal Easter Show

For the first time for a number of years the Department entered an exhibit in the above Show over the period from April 5th to 16th. A feature of the exhibit was the provision for sampling of fluoridated water which was sampled by approximately 38,000 people.

Film screenings were also provided in association with the A.M.P. Society, which had generously made space available for the Display.

Waratah Spring Festival

For the first occasion the Health Department entered a float in the procession held in conjunction with the above festival. The float, featuring the theme of "Progress in Health" was generally acknowledged as one of the most spectacular entered.

Departmental Journal

The quarterly Journal of the Department continued to be extremely popular, the circulation being increased to 14,000 per quarter.

Production of Films

During the year production was completed of the film on tuberculosis *The Silent Battle* (title changed from *Battle against a Bacillus*).

Medical Examination Centre—Annual Report, 1963

STAFF

(As at the 31st December, 1963)

Physician in Charge; 3 Medical Officers; 1 Relieving Medical Officer; 2 part-time Psychiatrists; 1 Nursing Sister; 8 Clerical Officers.

This Centre was opened at 86-88 George Street North, Sydney, on the 20th May, 1963, and the medical examinations which were previously made at 52 Bridge Street, Sydney, are now conducted at this address.

All applicants for employment by the various Government Departments, except the Department of Government Transport, and those wishing to be members of the Police Force or Warders in the Prisons Department, are medically examined at this Centre, or in the case of country dwellers, on its request, by Government Medical Officers throughout the State.

On receipt of the required medical documents at the Centre the applicant's fitness for employment is assessed and his category is determined in respect of his Superannuation Fund Rights.

When a Department desires that an employee who is on sick leave should be medically examined, or that an opinion should be expressed regarding his medical fitness to continue in employment, the investigation is made by the Centre or, if he resides outside the Metropolitan Area, by a Government Medical Officer.

Those who are employed as school teachers by the Education Department and those who desire employment as teachers were previously examined by the Division of the School Medical Service, but since last May these have been medically assessed by this Centre. However, prospective entrants to the Teachers' Colleges are examined by doctors of their own choice and their medical history cards are checked and processed by the Centre.

The following are details of the examinations of Teacher College Entrants and School Teachers:—

Teachers' College Entrants—

Private Practitioner examinations	..	..	..	..	..	3,149
Examinations at the Centre	..	..	..	..	..	3
Applicants for employment as School Teachers	..	..	..	..	..	909
Sick leave cases	..	..	..	..	..	161
Transfers to permanent staff	..	..	..	..	..	469
Special examinations	..	..	..	..	..	55
Retirements	..	..	..	..	..	21
Psychiatric examinations	..	..	..	..	..	421
						<hr/> 5,188 <hr/>

In addition the following examinations were carried out:—

Teachers' College entrants reviewed	..	..	..	..	..	382
Medical re-assessment of graduates of Teachers' Colleges	..	..	..	..	..	41
Applicants for overseas exchange	..	..	..	..	..	11
						<hr/> 434 <hr/>

The cause of sick leave in the 513 cases examined were as follows:—

	M.	F.	Total
Diseases of the cardio-vascular system	34	32	66
Diseases of the respiratory system:			
Tuberculosis	2	..	2
History of Tuberculosis	19	16	35
Bronchitis, asthma	5	7	12
Control of Tuberculosis	8	22	30
Gastro-intestinal disease	10	5	15
Malignant disease	4	8	12
Gynaecological disease .. .. .	..	7	7
Diseases of genito-urinary system	2	4	6
Diabetes mellitus	3	..	3
Skin disease	2	3	5
Rheumatism and disease of bone	3	2	5
Ear, nose and throat conditions	1	4	5
Anaemia	3	4	7
Acute infectious disease	3	1	4
Thyroid disease	2	1	3
Accidents	5	4	9
Disease of central nervous system	9	6	15
Mental disease:			
Psychosis	23	17	40
Psychoneurosis	38	59	97
Other	39	55	94
Orthopaedic	8	11	19
Hepatitis .. .. .	..	4	4
Hernia operations	2	..	2
Varicose Veins	1	3	4
Alcoholism	1	..	1
	<u>227</u>	<u>275</u>	<u>502</u>

During the year the retirement of 21 teachers was recommended, for the following reasons:—

	M.	F.	Total
Cardio-vascular disease	4	4	8
Injuries .. .. .	..	1	1
Mental disease:			
Psychoneurosis	1	..	1
Psychosis	4	1	5
Disease of the central nervous system	3	..	3
Malignant disease	1	..	1
Gastro-intestinal diseases	1	1	2
	<u>14</u>	<u>7</u>	<u>21</u>

Of the 3,149 candidates examined to determine fitness for entrance to a Teachers' College, 31 failed to pass the medical examination.

The causes of rejection were:—

	M.	F.	Total
Myopia	1	..	1
Other visual defects	4	..	4
Impairment of hearing	2	1	3
Other E.N.T. conditions .. .. .	..	3	3
Overweight .. .. .	..	4	4
Migraine and frequent headaches	1	..	1
Asthma	1	2	3
Orthopaedic conditions .. .. .	..	2	2
Lung condition .. .. .	..	1	1
Epilepsy	1	..	1
Skin conditions .. .. .	..	1	1
Nervous condition	2	..	2
Diabetes mellitus	1	2	3
Other .. .. .	..	2	2
	<u>13</u>	<u>18</u>	<u>31</u>

In addition to the examinations carried out at this Centre, arrangements were made for the medical checking of country applicants for employment by the Education Department or for their transfer to its permanent staff, and 611 such interviews were effected.

Further at the end of the year 2,600 graduates from the various Teachers' Colleges were medically examined to determine their fitness for permanent appointment.

Also prospective employees of some quasi-governmental and non-governmental bodies are examined by this Centre.

These are as follows:—

- The Ambulance Transport Service (Trainees).
- The Board of Fire Commissioners.
- The Civil Defence Organisation.
- The Grain Elevators Board.
- The Hunter District Water Board.
- The Main Roads Board.
- The Maritime Services Board.
- The Meat Industry Board.
- The New South Wales Milk Board.
- The Public Service Association.
- The Rural Bank of New South Wales.
- The State Dockyard Newcastle.
- The Sydney Grammar School.
- The United Dental Hospital.
- The University of New England.
- The University of New South Wales.
- The University of Sydney.
- The Water Conservation and Irrigation Commission.
- The Western Lands Commission.

The following is a survey of the examinations since May of this year (the month this Centre was opened) of applicants for employment by the various Divisions of the Public Service and Allied Services and employees of these Departments who were examined for sick leave, fitness to continue in employment and retirement from the Services because of disability. This survey refers to the Metropolitan Area only.

Examinations for entry into the New South Wales Public Service and Allied Services (Metropolitan Area) from the 20th May, 1963, to the 31st December, 1963, were:—

For permanent employment	1,507
For fitness to continue	116
For retirement	18
For psychiatric examinations	101
For re-examinations	16

In Country Districts 788 persons were examined for permanent employment and 21 for fitness to continue in the Service.

Applicants for employment by The Electricity Commission of New South Wales; The Metropolitan Water, Sewerage and Drainage Board; and as Warders in the Prisons Department; are examined by their own medical officers and the documents are referred to this Centre for assessment of medical fitness.

The Government Medical Officer at Newcastle examines prospective employees of the Hunter River District Water Board and the State Dockyard at Newcastle, and their papers are also referred to this Centre. No figures of these examinations are available.

One hundred and ninety-one Employees of the Maritime Services Board were examined for Full Sick Leave Privileges.

The examination of Repatriation Department pensioners for transport concessions are made at the request of the Transport Department; 1,962 were examined from 11th June, 1963, to 31st December, 1963.

Members of the general public are vaccinated against Smallpox; 462 were vaccinated from 11th June, 1963, to 31st December, 1963.

Throat swabbings are taken from children who are to be admitted to several institutions which are under the control of the Child Welfare Department; 213 were taken from 20th May, 1963, to 31st December, 1963.

Nasal swabbings are also taken for the Upper Respiratory Tract Infection Survey which is being conducted by the New South Wales Department of Public Health; 4 were taken from October, 1963, to 31st December, 1963.

PREVENTIVE MEDICINE

Division of Maternal and Baby Welfare—Annual Report, 1963

STAFF

Director: DR. GRACE J. BROWNE, M.B.E., M.B., Ch.M., F.R.C.O.G.

Deputy Director: DR. MAUREEN GRATTAN-SMITH, M.B., B.S., D.P.H.

Medical Staff: 1 Senior Medical Officer; 5 Medical Officers.

Nursing Staff of the Baby Health Centres: Nurse Inspector; Deputy Nurse Inspector;
1 Assistant Nurse Inspector.

Five Assistant Nurse Inspectors now on the Staffs of the Medical Officers of Health.

Nursing Establishment: 265.

Registered Nurses in Training Under Bond: 14.

Clerical Staff: Senior Clerical Officer and six Clerical Staff.

GENERAL

During the last decade the number of births has increased from 74,890 in 1953 to 84,065 in 1963: the birth rate in these years varied from 22.11 in 1953 to 20.75 per 1,000 population in 1963. The needs of these mothers had been met by expanding services at Prenatal Clinics, Baby Health Centres, Paediatric Clinics and Hospital and Home Visiting.

The number of Baby Health Centres in New South Wales is now 402 in addition there are 10 Visiting Services in the two Special Itinerant Country Circuits. The Sisters in charge of these Circuits have two-way radio cars and carry a considerable amount of equipment. The Circuit from Hillston was established this year. There are also six Visiting Services to Aboriginal Stations and Reserves. A Visiting Service was begun at the East Hills Migrant Hostel and it is anticipated that a Baby Health Centre will be established there early next year.

Modern buildings were erected this year for three Baby Health Centres. Ten new Baby Health Centres were established, three in the Metropolitan Area and seven in the Health Districts. The Baby Health Centre service at Cubawee was discontinued as the Aborigines moved to other living areas.

The attendances at the 15 Prenatal Clinics (12 in the Metropolitan and 3 in the Newcastle Health District), have continued to increase and additional sessions have now been provided in 6 of these Clinics by arranging for a Consultant Obstetrician from major Public Obstetric Teaching Hospitals to conduct weekly Clinics. The attendance of the Consultant provides the initial specialist assessment of pregnancy after “booking in” at the Hospital, and the required re-assessments in the later weeks of pregnancy, without it being necessary for the Mother to return to the Hospital.

With this year of decentralisation the interest in Maternal and Baby Welfare has been intensified and extended throughout the State. Last year three Assistant Nurse Inspectors were appointed to Newcastle, South Coast and Western Health Districts respectively, and this year similar appointments were made to the North Coast and North Western Health Districts. This advance in Public Health practice in New South Wales has been of special significance and advantage to the Division, as the basic objectives of the Division are to assist the mother in her pregnancy, to assist the mother in the care and nurture of her baby and her children under school age and to work in close co-operation with Medical Practitioners in any field relating to the welfare of Mothers and babies in which they or their ancillary services are engaged.

The pattern of the assistance offered to mothers has completely altered in the last decade responding to the changed pattern of the needs of the mothers. This has resulted from both the high standard of public health with the resultant control of infectious diseases, and from the culmination of limitless research into the growth and development of the baby and young child, and into the emotional needs of the mother in pregnancy and lactation.

These things and the recognition of the importance of the family unit in the community have made the link with the general practitioner stronger and in need of closer attention. Without decentralisation this could not be achieved in the country and the role of the Medical Officers of Health in strengthening this bond of mutual trust and assistance is more than timely.

The Department has made every effort to ensure that the Sisters in the Baby Health Centres should possess the requisite knowledge in these changing fields of medical and nursing practice. The General and Referral Paediatric Clinics in the Metropolitan Area where the Medical Staff of the Division has direct contact with the Sisters in these Baby Health Centres and direct access to all Sisters in these zones, also provide essential medical advice and guidance.

A series of lectures on normal child development, Mother Discussion Groups, and other lectures have been arranged. The Sisters too, have been most active in arranging their own group discussions and in co-operating in every way in their reading, attending evening lectures, discussion groups and in participating with the varying services at the Baby Health Centres.

The effort to bring effective advice and assistance to mothers will be made more comprehensive by the close relationships of the Medical Officers of Health with Medical Practitioners in their own area. This will strengthen the "bond of mutual trust and assistance" required by the Sisters so that they can give their best service to the mothers. Added to all these professional advantages, decentralisation is of inestimable personal benefit to the Sisters, who in the country, formerly worked in considerable isolation. They will now have the interest, guidance and assistance of not only their own Medical Officers of Health, but of their Local Nurse Inspector.

The co-operation of the Medical Officers of Health and the Assistant Nurse Inspector staff has been of great assistance in the control of staphylococcal infection and of puerperal infection by their closer liaison with the Obstetric Hospitals in the early investigation of maternal and infant deaths.

Furthermore, in the programme of building new Baby Health Centres, of the replacement of substandard premises and in the maintenance of standards of equipment and furnishing, the Medical, Nursing and Clerical Staff of the Health Districts have given invaluable assistance.

Two Pre-School Clinics at the Baby Health Centres were established this year in the North Coast Health District, and it is anticipated that two more will be opened early in the new year. A close liaison is planned in the Newcastle Health District with the Well-Baby Clinics at the three Public Obstetric Hospitals. The Mothercraft Home which is to be established for the Northern area of the State, in the recently vacated Nurses' home at the Royal Newcastle Hospital, will be linked with these three Hospitals, and all other Obstetric Hospitals in the area. It is anticipated that the special appointment of a "Nurse Liaison" Officer for the Mothercraft Home and the Well-Baby Clinics will make these links quickly effective.

At all times, the Division has received full co-operation from other Agencies concerned with the care of the Mother and her child. These Agencies include other State Departments, The Royal College of Obstetricians and Gynaecologists (N.S.W.): The Australian College of General Practitioners (N.S.W.): the Hospitals Commission, the Obstetric Department, University of Sydney, and the Department of Obstetrics and Gynaecology, University of New South Wales, the School of Public Health and Institute of Child Health, The Royal Alexandra Hospital for Children, the Paediatric Unit, Prince of Wales Hospital, Local Government Authorities, the Country Women's Association, The Red Cross Blood Transfusion Service, the Mental Health Association of New South Wales, the Kindergarten Union of New South Wales and the Sydney Day Nursery Schools Association. The co-ordination with the work of these organisations and the persons concerned with Maternal and Child Health continues to be more effective with each year of development and expansion of services. Their willing assistance given at all times is greatly appreciated.

In all this expansion of the services of the Division in the continuing adaptation to progressive methods of mother and child care and in the integration of the maternal and baby welfare services with the Health Districts, the work of the Divisional Medical Staff has been outstanding. In addition to this, their co-operation in the work of the Official Committees the Surveys and of publications has been of great value.

In conjunction with the Mental Health Association of New South Wales, efforts have been made to provide health education to mothers, emphasising normal growth and development of the child and this has taken the form of Evening Mother Discussion Groups. This work was first undertaken in 1961 and during the year considerable expansion took place.

A new edition of the booklet for expectant mothers *Healthy Motherhood*, was printed during 1963. A completely revised edition of the basic booklet for Mothers on the care of babies and young children *Our Babies* was distributed early this year.

A Monograph was also published on "Deaths Under Anaesthesia in Obstetric Practice": this was prepared by members of the Special Medical Committee Investigating Maternal Mortality with the co-operation of the members of the Special Committee Investigating Deaths Under Anaesthesia. The report represents the considered opinion of both Committees and deals with the deaths of 20 Mothers who died during pregnancy or childbirth from 1957-1960.

MATERNAL AND BABY WELFARE

The well-being of the home and the mother, and the survival of her baby is dependant on the health and well being of the mother from the earliest weeks of her pregnancy.

In all planning for maternal and child health the supervision and care of the mother is now recognised as the focal point in the reduction of maternal and perinatal morbidity and mortality and that this plays a leading role in establishing the emotional, mental and physical health of the child. It is on the happy and efficient mother that the making of the best home environment devolves.

Pregnancy is a normal physiological process in a healthy woman and complications, which may arise as pregnancy advances, are mainly preventable.

FREE CONSULTANT SERVICE DURING PREGNANCY AND DELIVERY

The need for consultation in complicated pregnancies and in childbirth is obvious to all. With the rapid growth of modern methods, it is quite impossible for general practitioners to handle all the cases coming under their care and the help of a consultant in difficult cases is an accepted routine in modern obstetric practice.

In order to provide this service to a mother who cannot afford the additional fee, a Free Consultant Service has been available for many years. This service permits a general practitioner, with a complicated case, in pregnancy or confinement to seek specialist help and the costs involved including consultation fees, and fares, are met by the Department of Public Health.

Apart from the maternal complications and possible death, the salvaging of foetal life, i.e., the prevention of stillbirths and neonatal deaths is at all times significant, and very often a specialist's advice, at the right time, will result in a healthy mother and a healthy baby, which might have otherwise resulted in a single or double tragedy.

This service has largely been used by country practitioners for whom it offers the possibility of expert advice even though the distances from the major centres may be many hundreds of miles.

In 1963 there were 31 consultations arranged—3 in the Metropolitan Area, 20 in the Wollongong area, and others at Hillston, Bathurst, Pilliga, Braidwood, Temora, Molong, Scone and Bourke. In addition, there were three telephone consultations, two of which were followed by a personal consultation.

SERVICES TO MOTHERS AND BABIES SUFFERING FROM RH INCOMPATABILITY

One of the most important factors in saving the lives of babies with Rh negative Mothers is the recognition of Rh incompatibility, the need for a correct decision regarding treatment, and the time of implementation of this treatment either before the births or immediately after the birth of the baby. With this in mind, a special service was established whereby the Department of Public Health pays the cost of transporting the mother before childbirth, or the baby and a skilled attendant immediately after birth, to the closest large centre where exchange transfusions can be done.

This service was established in 1961 and during the year four babies were brought to Sydney from Cessnock, Merimbula and Wagga, one baby was transported from Warren to Orange.

MOBILE BLOOD TRANSFUSION SERVICES

In co-operation with the Red Cross Blood Transfusion Service, five Metropolitan Obstetric Hospitals and the Royal Newcastle Hospital, a mobile service is on call at any time, day or night. This service is available in the Metropolitan Area of Sydney and within 100 miles of the Royal Newcastle Hospital. In the booklet, *Obstetric Practice in New South Wales*, which is distributed to all Medical Practitioners, information concerning contact with these Units is set out. During the year the Units were called on three occasions in the Metropolitan Area of Sydney.

The Special Medical Committee Investigating Maternal Mortality has, on account of the deaths of Mothers from haemorrhage, been concerned with the extension of Regional Blood Banks in New South Wales. Representations were made through the Department to the Hospitals Commission and conferences held with the Director of the Red Cross Blood Transfusion Service, Dr. R. Walsh. There are now seventeen Regional Blood Banks in New South Wales.

Blood donor panels have been established in all towns where there is an Obstetric Unit. Information concerning the method of obtaining assistance from these Centres is set out in the Departmental booklet referred to above.

The co-operation of the Women's Hospital, Crown Street; the Royal Hospital for Women; King George V Hospital; Royal North Shore Hospital; St. George's Hospital and the Royal Newcastle Hospital has been greatly appreciated and has made this service to Mother and child possible.

PRENATAL CLINICS

Twelve Prenatal Clinics are now being conducted in Baby Health Centres in outlying districts of the Metropolitan Area, and three in the Newcastle Health District. They continue to fulfil a real need in the community by making regular pre-natal care available to mothers living some distance away from the Obstetric Hospitals to which they have been booked for confinement.

Routine examinations of the mothers attending are performed by Medical Officers of the Division, and a Dietitian is available at the larger clinics to advise all Mothers concerning the fundamental importance of nutrition during pregnancy. Attendance figures continue to rise and as the population spreads in the peripheral areas, services at the Clinics are being adjusted to meet current needs.

It has been recognised for some time that women living in the outer suburbs often delay their visits to the Hospital because of the expenses involved in travelling long distances. An attempt to improve this position at selected Prenatal Clinics in outlying suburbs has been made by arranging for Consultant Obstetricians from Major Public Obstetric Teaching Hospitals to conduct additional Clinics on a weekly basis.

The attendance of the Consultant provided the initial assessment service after “ booking in ” at the Hospital and for essential reassessment later in pregnancy. At the initial assessment all necessary tests are performed and these records are returned to the Hospital.

Two Obstetric Teaching Hospitals within the Metropolitan Health District and one in the Newcastle Health District are participating in this scheme at present and it is hoped at a later date that other major Hospitals will also extend similar facilities to the Department.

The co-operation of these Obstetric Hospitals, the Red Cross Blood Transfusion Service, the Local District Hospitals, the Institute of Clinical Pathology at Lidcombe and the services they have provided for blood examination, X-ray diagnosis, etc., has provided a major factor in the success of the scheme.

The Division is considering the possibility of conducting a Research Survey into one of the more important problems encountered in the prenatal period, e.g., evidence of the association of prematurity and pre-eclamptic toxæmia as it is realised that there is a unique supply of data available in the records of these Clinics.

TABLE I—ATTENDANCES AT PRE-NATAL CLINICS—1963

Clinic	Primiparae		Multiparae		Post Natal	Total Visits	No. of Sessions
	First	Subsequent	First	Subsequent			
Metropolitan Health District—							
Blacktown	53	380	190	1,115	3	1,885	53
Campsie	17	88	54	357	0	515	52
Dee Why	55	308	104	917	3	1,388	52
Granville	36	282	87	630	0	1,035	52
Hornsby	3	12	7	95	3	131	50
Hurstville	21	114	68	527	0	735	52
Liverpool	42	257	153	836	1	1,289	52
Manly	72	449	125	714	1	1,358	46
Mascot	18	95	46	245	0	404	51
Narrabeen	45	308	128	670	4	1,146	48
Parramatta	104	589	366	1,861	10	3,175	98
Seven Hills	24	209	89	724	6	1,042	56
Totals	490	3,091	1,417	8,691	31	14,103	662
Newcastle Health District—							
Belmont	43	315	97	856	138	1,447	47
Cardiff	1	224	15	730	84	1,054	50
Charlestown	36	125	102	879	121	1,263	51
Totals	80	664	214	2,465	343	3,764	148
Grand Totals	570	3,755	1,631	11,156	374	17,867	810

PREPARATION FOR MOTHERHOOD GROUP CLASSES

The National Health and Medical Research Council has recommended that in addition to the usual medical antenatal supervision, there should be continuous preparation for parenthood during the antenatal period. It is realised that mothers who do not regularly attend the Obstetric Hospital before confinement lack the opportunity of attending the childbirth instruction classes which are conducted there. Plans have been made to establish a series of lecture demonstrations by selected personnel and discussion groups at Baby Health Centres. The first one began at the Parramatta Prenatal Clinic. This is a pilot scheme and it is anticipated that other group classes will be soon established and the service extended as staff are trained and funds become available.

MATERNAL DEATHS

The loss of a mother’s life in pregnancy or childbirth is always a tragedy and great stress has been placed on maternal deaths in the last three decades and it is gratifying to record that in 1963 the number of maternal deaths was the lowest yet recorded in the State. There were 27 maternal deaths for 84,065 live births, the maternal death rate being 0.32 per 1,000 live births compared with 0.34 in 1962. A comparison of maternal death rates over the last 23 years (See table II) shows a great achievement in the saving of lives of Mothers. For 44,767 live births in 1935, 282 Mothers lost their lives, whereas in 1963 although the number of live births had practically doubled, 27 women died in child-birth.

During 1963, the number of deaths from maternal causes (excluding criminal abortion) in New South Wales was 26, which represents a mortality rate of 3 women per 10,000 live births.

In 1963, one woman died in New South Wales from criminal abortion compared with three in 1962.

TABLE II—TOTAL MATERNAL DEATHS AND DEATHS FROM CRIMINAL ABORTION, NEW SOUTH WALES, 1940-1963

Year			Total Maternal Deaths (including Criminal Abortion)		Deaths from Criminal Abortion	
			Number	Rate per 1,000 Live Births	Number	Rate per 1,000 Live Births
SYDNEY METROPOLITAN AREA						
1940	..	..	81	4.06	22	1.10
1950	..	..	24	.81	6	.20
1960	..	..	21	.51	7	.17
1962	..	..	15	.34	3	.07
1963	..	..	10	.23	1	.02
REMAINDER OF STATE						
1940	..	..	128	4.35	12	.41
1950	..	..	56	1.33	4	.09
1960	..	..	35	.85	5	.12
1962	..	..	14	.33	....	....
1963	..	..	17	.42	....	....
NEW SOUTH WALES						
1940	..	..	209	4.23	34	.11
1950	..	..	80	1.12	10	.14
1960	..	..	56	.68	12	.14
1962	..	..	29	.34	3	.04
1963	..	..	27	.32	1	.01

TABLE III

Table III shows a comparison of the causes of maternal deaths for the years 1961 to 1963.

DEATHS DUE TO MATERNAL CAUSES, NEW SOUTH WALES
NUMBER AND RATE, 1961 TO 1963

Cause of Death (a)										1961	1962	1963
NUMBER												
Toxaemia of Pregnancy	..	..	..	..	..	..	..	..	..	4	4	2
Ectopic pregnancy	..	..	..	..	..	..	..	..	..	1	3	1
Placenta praevia and other haemorrhage of pregnancy	..	..	..	..	..	..	..	..	..	3	..	1
Other complications of pregnancy	..	..	..	..	..	..	..	..	..	4	2	4
Abortion, excluding criminal	..	..	..	..	..	..	..	..	..	3	4	2
Delivery complicated by haemorrhage	..	..	..	..	..	..	..	..	..	4	2	1
Delivery with other specified complications	..	..	..	..	..	..	..	..	..	5	5	7
Puerperal urinary infection without other sepsis	..	..	..	..	..	..	..	..	..	..	1	..
Sepsis of childbirth and the puerperium	..	..	..	..	..	..	..	..	..	2	2	..
Puerperal phlebitis and thrombosis	..	..	..	..	..	..	..	..	..	1	..	2
Puerperal pulmonary embolism	..	..	..	..	..	..	..	..	..	2	3	3
Other and unspecified complications of the puerperium	..	..	..	..	..	..	..	..	..	5	..	3
Total, excluding criminal abortion	..	..	..	..	..	..	..	..	..	34	26	26
Criminal abortion	..	..	..	..	..	..	..	..	..	9	3	1
Total	..	..	..	..	..	..	..	..	..	43	29	27
RATE (b)												
Toxaemia of Pregnancy	..	..	..	..	..	..	..	..	..	.05	.05	.02
Ectopic pregnancy	..	..	..	..	..	..	..	..	..	.01	.04	.01
Placenta praevia and other haemorrhage of pregnancy	..	..	..	..	..	..	..	..	..	.03	..	.01
Other complications of pregnancy	..	..	..	..	..	..	..	..	..	.05	.02	.05
Abortion, excluding criminal	..	..	..	..	..	..	..	..	..	.03	.05	.02
Delivery complicated by haemorrhage	..	..	..	..	..	..	..	..	..	.05	.02	.01
Delivery with other specified complications	..	..	..	..	..	..	..	..	..	.06	.06	.08
Puerperal urinary infection without other sepsis	..	..	..	..	..	..	..	..	..	..	.01	..
Sepsis of childbirth and the puerperium	..	..	..	..	..	..	..	..	..	.02	.02	..
Puerperal phlebitis and thrombosis	..	..	..	..	..	..	..	..	..	.01	..	.02
Puerperal pulmonary embolism	..	..	..	..	..	..	..	..	..	.02	.04	.04
Other and unspecified complications of the puerperium	..	..	..	..	..	..	..	..	..	.06	..	.04
Total, excluding criminal abortion	..	..	..	..	..	..	..	..	..	.39	.30	.31
Criminal abortion	..	..	..	..	..	..	..	..	..	.11	.04	.01
Total	..	..	..	..	..	..	..	..	..	.50	.34	.32

(a) Classified according to the Seventh Revision (1955) of the International Classification of Diseases.
(b) Number of deaths per 1,000 live births.

Many factors have influenced this dramatic fall, of which antenatal care, the use of antibiotics in puerperal sepsis, improved obstetrics and the education of the mother herself are the most vital factors. Deaths from pre-eclamptic toxæmia and eclampsia are the lowest on record. In 1950 seventeen mothers lost their lives from this almost preventable disease and this year two mothers lost their lives; a rate of .02 compared with .24 in 1950. This can be attributed to improved antenatal care which has been a major part of the public health programme of this Division. It is a reflection of the team work in obstetrics whereby the developments of modern science are made effective by the co-operation of the Mother and the high standard in the Obstetric Hospital Antenatal Clinics, of the supervision by Medical Practitioners themselves. The Medical Staff of the Division has made a special contribution to this reduction in assisting the Obstetric Teaching Hospitals in the Departmental Clinics.

Deaths from thrombosis, phlebitis and puerperal pulmonary embolism remained a major group of causes of death and also complicated delivery including three deaths from rupture of the uterus.

SPECIAL MEDICAL COMMITTEE INVESTIGATING MATERNAL MORTALITY

The Special Medical Committee Investigating Maternal Mortality was set up in 1939. Members are appointed, subject to the Minister's approval, on the recommendation of the Director-General of Public Health who ascertains beforehand the willingness of the person nominated to accept appointment. No special legislation applies.

Constitution

The Committee is constituted as follows:—

The Director-General of Public Health (Chairman).

The Director of Maternal and Baby Welfare (Medical Secretary).

The Senior Honorary Medical Officer of each of two Obstetric Teaching Hospitals, (solely for obstetrics and gynaecological patients).*

The Professor of Obstetrics: University of Sydney, Professor B. T. Mayes.

The Professor of Obstetrics and Gynaecology: University of New South Wales, Professor Harvey Carey.

An Emeritus Professor: expert in Obstetrics. †

A representative of General Practitioners nominated by the New South Wales Branch of the Australian Medical Association, Dr. E. A. Tivey.

A representative of the Royal College of Obstetricians and Gynaecologists, Australian Regional Council, N.S.W., Dr. J. N. Chesterman.

A representative of the Australian College of Pathologists, Dr. J. Murray Moyes.

During the year the Committee suffered the loss of Emeritus Professor F. J. Browne, a distinguished obstetrician and gynaecologist, who has served the Committee for eleven years. His outstanding and notable contributions to the publications of the Committee and his stimulating approach to debate in Committee with resultant interest and clarifying of opinions concerning the histories presented, were greatly valued. A moving tribute to Professor Browne was made by two senior members of Committee at its September meeting—"a crusader for the highest standards of obstetric care"—"a man dedicated to his profession in a way that is an example to us all".

Two additional appointments were made to the Committee during the year, a representative of the Australian College of Pathologists, N.S.W. Branch, Dr. Murray Moyes of the Women's Hospital, Crown Street, and Professor Harvey Carey, recently appointed to the Chair of Obstetrics and Gynaecology at the University of New South Wales.

At the six meetings of the above Committee many aspects of obstetric practice and the welfare of the mothers and their babies were discussed as the result of study of the case histories of mothers who had died. Each case history was assessed from the point of view of preventability and also studied by the Committee to assess the obstetric care and facilities available and whether the General Practitioner or practising Consultant could be assisted with additional services in or out of Hospital. The latest information, as to the availability of the services provided, is sent to every medical practitioner in New South Wales, in the booklet *Obstetric Practice in New South Wales*.

Forty-two case histories of maternal deaths or deaths associated with pregnancy, registered in 1963, were considered by the Committee and fourteen case histories for deaths registered in 1962. In addition fourteen earlier case histories were reviewed following the availability of additional information obtained at the request of the Committee.

The present low maternal death rate, the lowest on record .32 per 1,000 live births, is no doubt due in part to the work of the members of this Committee.

* The Royal Hospital for Women, Paddington, Dr. J. Mutton; The Women's Hospital, Crown Street, Sydney, Dr. A. Grant.

† Formerly the late Professor J. C. Windeyer, succeeded by the late Professor F. J. Browne.

Contact was made throughout the year with the Bureau of Census and Statistics. The assistance of Mr. Dibley and his Officers is greatly appreciated. The Committee has for many years made representation for the adaptation of the coding under Section XI of the Manual of International Classification of Diseases, Injury and Death, particularly the coding recording pre-eclamptic toxæmia, chronic hypertension and renal disease existing before pregnancy, and the comparable coding of deaths from other diseases but associated with pregnancy.

It is gratifying to note that Australia forwarded to the Bureau of Census and Statistics important recommendations on maternal and perinatal mortality, many of them arising from the deliberations of this Committee and the Paediatric Advisory Committee. This is the first time too that Australia has been invited to send a representative to the World Health Organisation Conferences in Geneva.

A special Sub-Committee appointed to study the findings of the Committee and to prepare material therefrom for publication, continued to consider the deaths associated with complicated deliveries 1957-1960.

This material was subsequently submitted to the full Committee. In publishing material concerning these maternal deaths the Committee, had, as one of its chief objectives, the prevention of the chief factors found to be contributory to these deaths. The factor most deplored by the Committee was failure to call in a Consultant. Criticism of the conduct of labour was secondary to the Committee's attempt to highlight these simple primary avoidable factors. Free haematological examinations have been available for many years to all country Mothers and all Obstetric Hospitals outside Sydney hold suitable material for despatch of specimens.

Three General Reports have already been published in the *Medical Journal of Australia* indicating the Committee's findings with regard to deaths of Mothers from 1939-1956 in this State—30th December, 1944, 11th April, 1953 and 2nd January, 1960 for the years 1939-1943, 1944-1949, and 1950-1956 respectively. A Report on "Deaths of Mothers from Haemorrhage in Childbirth" was published on 31st March, 1962 and one concerning "Deaths under Anaesthesia in Obstetric Practice" on 24th November, 1962: both these Reports considered deaths occurring during 1957-1960. The time and effort given by members of this Sub-Committee is appreciated. The Committee wishes to acknowledge the valuable contribution of the members of the Sub-Committee on Publications, the late Emeritus Professor F. J. Browne, Dr. J. N. Chesterman, Dr. T. H. Small, Dr. T. I. Cope and also of the Medical and Clerical Staff of the Division of Maternal and Baby Welfare.

FREE CONSULTANT ANAESTHETIST PANEL

As the result of the study of the deaths of mothers under anaesthesia and the recurring evidence of the need of the services of an expert anaesthetist in so many critical phases of obstetric practice, the Committee has recommended that a panel of Consultant Anaesthetists be appointed. This has been approved by the Minister and it is anticipated that this service will be available early next year.

NOTIFICATION OF STAPHYLOCOCCAL INFECTION

The control of staphylococcal infection particularly since the penicillin resistant coagulance positive organisms became prevalent, has been in all hospitals, a problem of major proportions.

This infection constitutes a hazard to both mothers and babies: in the mother from breast abscess and in the baby many lesions—conjunctivitis, rhinitis, infection of the umbilicus, pustular rashes, any of which could result in a staphylococcal pneumonia.

At the request of the Commonwealth Health Department recording of breast abscesses in mothers attending Baby Health Centres was carried out for many years by the Baby Health Centre Sisters. In this way the incidence of infection in many Obstetric Hospitals could be gauged and contact could then be made with the Hospital concerned. This recording was of great importance as the Hospital was often unaware of the existence of the breast abscesses and therefore of the infection rate within their own Hospital because these abscesses usually develop after the mother has left Hospital.

The Division of Maternal and Baby Welfare through the close liaison established with Obstetric Hospitals in this State has assisted Hospitals in the control of this infection by arranging for Medical Officers to visit Hospitals whenever the infection rate was known to be high.

At this inspection the Medical Officer made contact with the Medical Nursing and Administrative personnel and through conferences and guidance many problems were solved.

Although in September, 1958, staphylococcal infection in infants under four weeks, staphylococcal mastitis and staphylococcal pneumonia was declared notifiable under the Public Health Act, the practical difficulties confronting Obstetric Hospitals in the notification of staphylococcal infection in infants under 4 weeks were fully appreciated by this Division.

One year later a Survey was begun to assess the true infection rate and to assist in the solution of the recording and notification problems. This Survey covered all Metropolitan Hospitals and all the Hospitals outside Sydney with 400 deliveries per annum. The most valuable result was the understanding of the need to devise methods whereby the notification of staphylococcal infection can be carried out efficiently at Hospitals with a minimum of time and routine effort by the Staff.

The following year an intensive Short Term Survey with full bacteriological control and complete follow up was carried out at three Teaching Hospitals. This emphasised the necessity to have simple and efficient recording.

Earlier this year, after further experience in the methods of notification at many Obstetric Hospitals the Hospital Form originally used, and later modified during these Surveys, was again modified with the objective of assisting the Hospitals in efficient recording. The Nurse is the first Staff member to find the lesion, and a simplified Hospital Form was found acceptable after a number of conferences with the Medical, Nursing and Administrative personnel of the Obstetric Teaching Hospitals. This is a simple and efficient recording of lesions as they occur in the wards.

This record is forwarded with a Schedule 4 duly completed by a legally qualified medical practitioner to the Department. All Obstetric Hospitals were then contacted by letter and requested to co-operate in making these returns four weekly or immediately if the infection rate was rising.

On receipt of the notifications, copies are sent to all Health Districts: in this way any rise of infection rate can be assessed by the Medical Officer of Health. In the Metropolitan and remainder of the State any deviation can be assessed by the Medical Staff of the Division and the Division of Epidemiology.

During 1963 the notifications were as follows:—

January	493
February	307
March	337
April	326
May	213
June	84
July	151
August	7
September	51
October	21
November	124
December	106
Total	2,220

While the number of notifications is larger than in previous years, this is not regarded as a rise in infection rate but more efficient recording and increased co-operation since the introduction of the simpler form in January.

The important function in this method of notification is the safeguard within the Hospitals themselves of a routine day to day measure of the infection rate. In this way the basic factor in the prevention of staphylococcal infection—constant vigilance by the Medical and Nursing Staff is maintained.

CONTROL OF PUERPERAL INFECTION—NOTIFICATION OF PYREXIA AND INFECTION

Obstetric Nurses are obliged under the New South Wales Nurses Registration Act and Regulations to notify the occurrence of puerperal fever of “100.4°” on more than one occasion during second to tenth day of the puerperium, which occurs in their practice, stating the cause of this fever as diagnosed by the Medical Practitioner in charge of the case. This notification is directed to the Nurses’ Registration Board, and further action depends on whether the cause of the fever can be regarded as of puerperal origin. During the year, 175 such cases were notified.

If the cause is not considered by the Medical Practitioner in charge of the case to be associated with the puerperal state, as in 113 of these cases, no further action is taken. Puerperal infection was diagnosed in 62 cases. These were therefore notified under the terms of the Public Health Act by the Medical Practitioners. Eleven pyrexias followed Caesarean Section; other forms of infection were bacteruria, endometritis, parametritis, retained products of conception, laceration of vagina, haematoma of the vagina, and infection of perineal wounds. In causative organisms included, haemolytic streptococci, staphylococcus aureus, bacillus proteuns and esch. coli.

In the remainder of the cases of pyrexia, (51), the main causes of pyrexia were as follows: upper respiratory tract infection (23), including bronchitis and pneumonia (4 cases), urinary tract infection (2) including 2 cases of pyelonephritis, influenza and other viral infection (9). Other causes were drug reactions, hepatitis and allergic dermatitis. Nineteen cases of breast infection or engorgement were also notified.

BABY HEALTH CENTRES

The number of Baby Health Centres in New South Wales including 11 Centres on Aboriginal stations or Reserves is 402. One hundred and forty-one of these are in the Metropolitan Area and 261 in the Country.

There are now 17 Visiting Services conducted in halls or other adapted premises. There are 10 Visiting Services within the two Special Itinerant Country Circuits. Six Visiting Services are provided for Aboriginal Stations, Reserves or Settlements and a temporary Visiting Service has begun at the East Hills Migrant Hostel.

TABLE IV—NUMBER OF ESTABLISHED BABY HEALTH CENTRES

<i>Health District</i>	1962	1963
Metropolitan	139	141
Newcastle	56	58
South Coast	47	49
Western	45	45
North Coast	25	25
North Western	17	18
Riverina	54	60
Broken Hill	4	4
Unincorporated	2	2
	<hr/> 389	<hr/> 402

One of the highlights of the year was that the Second Special Itinerant Country Circuit with Headquarters at Hillston was established with the enthusiastic co-operation of the Carrathool Shire Council.

A two-way radio car is provided by the Shire Council and a mileage allowance is made by the Department. The headquarters of the Circuit is at the new Baby Health Centre at Hillston and five Visiting Services are conducted regularly at Carrathool, Roto, Merriwagga, Rankin Springs and Goolgowie. Visits are also made to farm and station properties bringing the valuable assistance and advice of the Sister to expectant mothers and to mothers of young children in those districts where distance and isolation is a problem. This service is an outstanding success and the co-operation of the Shire of Carrathool is greatly appreciated.

The Balranald and Wentworth Shire Councils continue to participate in the service with Headquarters at Balranald where the Sister also works from a two-way radio car provided by the Councils. This service is of great value to the mothers of these districts. There are Baby Health Centres at Balranald, Dareton and Wentworth and 5 Visiting Services at Hatfield, Kyalite, Burongo, Gol Gol and Euston. The Sister also visits at farm and station properties in twelve areas.

The Medical Officer of Health in the Western Health District has already opened negotiations for the establishment of another similar service with headquarters at Nyngan in co-operation with the Nyngan Shire Council. This will take in Trangie, Nevertire and Warren, working with the Far West Children's Health Scheme, which at present conducts a rail car service to the west of Nyngan.

The immediate success of these Special Circuits has proved that it is possible to give excellent services to mothers and their children in these remote areas and it is hoped that by the extension of this type of service, mothers and children in the Western Section of New South Wales will receive the same advantages as those mothers in the heavily populated areas.

Six new Baby Health Centres were established in the country; Isiland Bend and Narooma in the South Coast Health District, Wangi Wangi and South West Rocks in the Newcastle Health District, Woodenbong in the North Coast Health District and Gulargambone in the Western Health District.

The co-operating authority for Island Bend was the Snowy Mountain Authority, for Wangi Wangi the Lake Macquarie Shire Council and for Gulargambone the Coonamble Shire Council. The local branches of the Country Women's Association were the responsible authority for Narooma, South West Rocks and Woodenbong. In each of these projects the Medical Officer of Health has worked closely with the Division in carrying out negotiations with the local authority on the choice of the site and sketch plans, while the Division has guided the approval of sketch plans, then working drawings and specifications and later of the tender, following by payments in due course from the Loan Vote Funds allocated to the Division.

Sub-standard premises have been replaced by attractive modern Baby Health Centre buildings at Tumut and Katoomba. The up-to-date furniture and furnishings and the improvement in the conditions for the waiting Mothers and for the work of the Sisters has been greatly appreciated.

At Tenterfield the Baby Health Centre which had been conducted by the Far West Children's Health Scheme was taken over by the Department. The building was erected in 1952 in conjunction with the Country Women's Association and subsidised by the Department.

In the Metropolitan Area three new Baby Health Centre projects were completed with the establishment of new Centres at Collaroy Plateau, Fairfield Heights and Mount Druitt. These are all in rapidly growing areas and fulfil an urgent need for the Mothers of the Districts.

A fine modern building is being erected to replace the old premises for the Baby Health Centre at Alexandria, which was established in 1914. This building will be completed to celebrate the Golden Jubilee of the Baby Health Centre Service in 1964.

A combined Committee of the Baby Health Centre Nurses Group and the Baby Health centre Reunion are planning the Golden Jubilee Celebration and the Department has granted a subsidy to the City Council for this building which will commemorate the inauguration of Baby Health Centre Services in this State and the work of the three Nurses, Miss Lucy Spencer, Miss Edith Pike and Miss Irene Williams who began the service fifty years ago.

A new Baby Health Centre was also built during the year at Petersham. This Baby Health Centre was established in 1926 and the work was carried out within the precincts of the Tresillian Mothercraft Home which is conducted by the Royal Society for the Welfare of Mothers and Babies. Their co-operation over these years has been of great importance as, among other advantages, a member of the Honorary Medical Staff has always held a Clinic at the Baby Health Centre each week. This close association has been greatly appreciated and our thanks are expressed to the Society. It is regretted that a more central location for the Baby Health Centre services for Petersham became necessary.

In the financial year 1962-1963 an amount of £57,000 was voted from Loan Funds and in the financial year 1963-1964 a further amount of £65,165 was voted for the establishment and equipment of Baby Health Centres. There were still over 150 applications for the establishment of new Centres at the end of the year, all of these are regarded as warranted but a strict priority list is maintained.

During the year payments were completed on major projects for new Baby Health Centre buildings and new equipment to several minor projects for additions to existing buildings, for sewerage and other necessary amenities. Where approval has been granted for subsidy and the local authority is unable to proceed for the time being, funds are made available to the district next on the priority list.

Baby Health Centres at Migrant Hostels and the State Housing Commission Estate at Bradfield Park continue to give valuable service.

Acknowledgments

The co-operation, interest and enthusiasm of the local branches of the Country Women's Association of the Municipal and Shire Councils in all these activities are greatly appreciated. These authorities not only provide the site and contribute 25 per cent of the original cost of the building and equipment but they maintain the premises, equipment and grounds of the Baby Health Centres in good condition. They are also of great assistance to the Sisters in many aspects of the management of the Baby Health Centre.

TABLE V—ATTENDANCES AT BABY HEALTH CENTRES

The individual and total attendances at Baby Health Centres situated within the Health Districts during 1963, compared with those for 1962 were:—

<i>Health District</i>	<i>Individual Attendances</i>		<i>Total Attendances</i>	
	1962	1963	1962	1963
Metropolitan	73,667	76,374	714,099	697,910
Newcastle	11,904	12,238	104,442	105,080
South Coast	10,231	10,543	90,207	89,563
Western	8,296	8,856	75,588	77,414
North Coast	4,534	4,473	40,654	40,173
North Western	4,417	4,723	38,099	23,695
Riverina	8,612	7,766	72,671	69,837
Broken Hill	1,432	1,427	14,648	13,407
Unincorporated	626	166	1,358	1,544
	123,710	126,566	1,153,766	1,136,655

There was an increase of 2,707 in the number of individual babies attending Metropolitan Baby Health Centres during 1963, although the total number of attendances was 34,189 less than in the previous year.

An examination of attendance figures at the Baby Health Centres where the fall in total attendances was most marked, indicated that attendances were low during the very wet months of the year, when a mother would hesitate to take a young baby out in extreme weather conditions.

THE BABY HEALTH CENTRE NURSING STAFF

The total establishment of Baby Health Centre Nursing Staff to the Baby Health Centres was increased from 256 to 265. Approval was also given to recruit up to 14 Registered Nurses as Trainees in Mothercraft Training Schools under bond to the Department. These acceptances could now be arranged in anticipation of known vacancies due to resignations and retirements.

The Supervising Staff is now eight units; a Nurse Inspector, Deputy Nurse Inspector and six Assistant Nurse Inspectors. Five of the Assistant Nurse Inspectors are on the establishment of the Medical Officers of Health: two of these appointments were made during the year, to the North Coast and to the North Western Health Districts.

The Baby Health Centre Sisters have continued to make their invaluable contribution to the welfare of mothers and babies and pre-school children. Their work is of outstanding importance in the health programme for the mothers in this State and their willing co-operation and keen interest in all new projects and in the surveys undertaken in the Baby Health Centre is greatly appreciated.

The country allowance for compulsory country service continues to be a factor in improving the conditions of service for these three years of service.

After an informal meeting in Sydney of the Nurse Inspectors and the Assistant Nurse Inspectors in August, it was arranged that Quarterly Conferences be held regularly. The first of these Conferences took place in November: they provide for discussion of administrative and many other problems arising from the conduct of Baby Health Centres. The responsibility of the finance required for transport and sustenance and the arrangements for the relieving staff are also discussed. These Conferences have proved of special benefit as there can be a mutual exchange of experiences in the widely differing areas of the State.

The busy programme of work undertaken by the Nurse Inspectors in Sydney has continued. One of their activities is field inspections, these have continued to afford valuable contact with the Sisters conducting Baby Health Centres. These inspections give an opportunity to the Sisters to discuss problems associated with their work and for the Nurse Inspectors to convey to the Sisters an outline of the policies regarding all aspects of the conduct of the Baby Health Centres.

Before the decentralisation of the Baby Health Centres to the control of the Medical Officers of Health, all inspections were carried out by the three Nurse Inspectors from Sydney. This meant that contact with the Sisters working in the country areas was not as frequent as was desired. However an endeavour was made to visit each Baby Health Centre in the country every two years.

District inspections of Baby Health Centres in North Western and North Coast Health Districts, were carried out before the appointment of the Assistant Nurse Inspectors to these Districts. In addition, there were 9 routine inspections in the Riverina and 10 special country inspections. In the Metropolitan Area, 127 routine and 19 special inspections were carried out.

In-Service Training

The In-Service Training Course for Public Health Nurses conducted by the School Medical Service enables Nurses within the Department, to attend formal lectures, take part in field observations and group discussions and gain insight into the scope of work which may be carried out by the Nurse engaged in the field of Public Health.

The Deputy Nurse Inspector, Assistant Nurse Inspector and one other Baby Health Centre Sister completed this Course during the year. Each officer has reported that they have been able to apply much of the knowledge gained to their day to day work.

Three Courses of six lectures in normal child development given by Dr. F. W. Clements and Mr. J. Cullen of the School of Public Health, University of Sydney, were attended by 48 Baby Health Centre Sisters: this included some temporary and part-time Officers. These lectures are not only important to those Baby Health Centre Sisters who received their Mothercraft training before these subjects were incorporated in the Mothercraft Certificate Course, but are found to be of great value to Sisters who have already attended similar lectures in the Training.

Each Baby Health Centre Sister has on entering duty, a period of In-Service Training during the first weeks of service. This is arranged at various Baby Health Centres where time is arranged for the selected Sister-in-Charge to assist the Sister entering on duty to understand the methods of conducting a Baby Health Centre, the special approach to the Mothers, the significance of the Baby Health Centre work and its relation to the Department as a whole.

The Bond Training Scheme continues to be successful and 7 Sisters completed their training under this scheme during the year: also 5 other Sisters began this training. This provides for the General Trained Nurse entering the Service and proceeding to the Mothercraft Training Course at one of the recognised Mothercraft Training Schools.

Sisters' Discussion Groups

In the Metropolitan Area, Sisters' Discussion Groups were also organised to provide a special medium of in-service communication and instruction. Ten Discussion Groups were conducted by a Medical Officer and a Nurse Inspector and twenty-two were supervised by one of the Nurse Inspectors.

Baby Health Centre Sisters' Group

The recognition that there was little opportunity in the service for the Sisters to have contact with each other to discuss their mutual problems of work, resulted in the formation last year of a Committee which organised the Baby Health Centre Sisters' Group. Five evening meetings were held during the year when a Guest Speaker was invited to speak on a subject designed to stimulate the Sisters to keep abreast of current trends in their field of nursing. This is an entirely voluntary activity organised by the Sisters themselves.

SPECIAL FACILITIES FOR NEW AUSTRALIAN MOTHERS AT MIGRANT HOSTELS

Many immigrants to Australia are accommodated at Migrant Hostels which provide temporary housing for migrants while they adjust to their new environment. Some of these families reside at the hostels for lengthy periods until they find employment which is suitable to them, or until they can set up their own homes in suburban communities.

Because of the large number of young families accommodated within these hostels, Baby Health Centre Services have been provided within the precinct of the hostels themselves. Baby Health Centres at Villawood and Scheyville have been in operation for many years.

A weekly Visiting Service was begun at East Hills Migrant Hostel during the year and a Baby Health Centre will be opened there early in the new year when accommodation will be available. Plans are being finalised for Baby Health Centres to be established in the Bunnerong, Matraville and Cabramatta Migrant Hostels.

TRANSLATIONS ON SPECIAL SUBJECTS FOR NEW AUSTRALIAN MOTHERS

For many years translations in print and in script, on various subjects important to mothers during pregnancy and in the care of their babies, have been made available at all Baby Health Centres, Obstetric Hospitals and other instrumentalities responsible for the care of mothers during pregnancy and confinement and the care of their babies.

During this year translations in the Spanish language were added to the 18 already available.

The co-operation of the Commonwealth Migrant Information Service not only in translations of printing but also of script is greatly appreciated.

ABORIGINAL MOTHERS AND THEIR BABIES

Every effort is made to bring services to aboriginal mothers and their babies. In many areas of the State where distance is no problem the aboriginal mothers attend the local Baby Health Centre. In other districts it is necessary to establish Services on Reserves and Stations. The Sisters conducting these Baby Health Centres bring a very intense interest to the welfare of these Mothers and their babies. By this sensitive and kindly approach the Sisters overcome the inherent shyness and diffidence of these mothers and gain full confidence and co-operation with ease.

This results in improvement in the health and happiness of the Mothers and often means the survival of babies whose lives would otherwise be in jeopardy.

At a conference held with the Departmental representative on the Aborigines Protection Board, to discuss services to aboriginal mothers and their children, it was agreed that if any improvement was to be effected in the perinatal mortality rate and the health of the Aboriginal Mother and her baby, the problem must be attacked on a local basis.

It was recognised that if this was to be effective, the services already provided by the Baby Health Centre should be expanded into the prenatal and early postnatal field under the guidance of the Medical Officer of Health.

This would result in more effective contact with the Mother and her family and the reduction of maternal and infant morbidity mortality and in the better use of available facilities.

Eleven Baby Health Centres are conducted specially for aboriginal Mothers at Bellbrook, Burnt Bridge, Caroon, Coff's Harbour, Cowra, Murrin Bridge, Namina, Purfleet, Sand Hills, Three Way Bridge and Wallaga Lake.

There are also six visiting services at the Aboriginal settlements or reserves at Murie, Condobolin, Peak Hill, Dareton, Balranald and Green Hills.

The Cubawee Baby Health Centre was discontinued in the North Coast Health District as the aborigines moved to another location.

INFANT FEEDING

The Special Committee on Infant Feeding set up in the previous year continued its deliberations. On this Committee were representatives of the various organisations responsible for the teaching of medical students and nurses. These included the Professor of Child Health, University of Sydney, the Professor of Paediatrics, University of New South Wales, and the medical representatives of the Nurses' Mothercraft Training Schools.

The Divisional Medical Officers and the Nurse Inspectors made a notable contribution to the success of the Committee by the extensive preparation of material for each meeting. This work was greatly appreciated.

From the diverse material in use, both for the training of medical students and nurses, basic principles were evolved. Agreement was also reached that preparation of material for use for the different disciplines and in different situations will vary considerably, to meet the variety of needs and purposes.

In this way the confusion and difficulties arising from diversity of practice and divergence of some basic principles, will be eliminated and the teaching of medical students and nursing students in mothercraft courses for general trained nurses and mothercraft nursing will no longer differ basically. The most important result is that the Baby Health Centre Sisters will no longer be at variance with General Practitioners in advising the Mothers on Infant Feeding.

Revision of the Departmental Infant Feeding Notes for the guidance of Baby Health Centre Sisters was promptly completed following the final meeting of the Committee.

THE PREMATURE BABY VISITING SERVICE

For many years the Division has provided a Visiting Service for the mothers of premature babies when they leave the Hospital: this service, is available to all Obstetric Hospitals. Those co-operating are the Manly and Parramatta District Hospitals, St. George, the Women's Hospital Crown Street, the Royal Hospital for Women and the Royal North Shore Hospital.

MOTHERCRAFT CLASSES

To assist expectant mothers to learn about Baby Care, Mothercraft Classes were conducted at Granville, Eastwood and Bankstown Baby Health Centres throughout the year. Any expectant mother may attend these classes and learn from the demonstrations, the techniques used in bathing a baby and how to make up a baby's cot. Advice on the purchase of the layette is also given. It is hoped to extend these classes and give more expectant Mothers the opportunity of obtaining this valued instruction in mothercraft.

MOTHER DISCUSSION GROUPS

A series of Discussion Groups for Mothers conducted by the New South Wales Association for Mental Health were held in the evenings at a number of Baby Health Centres this year. These Discussion Groups were begun in 1962 and during this year 25 series were conducted in 19 Baby Health Centres in the following districts:—

Allambie Heights, Avalon, Burwood, Double Bay, Ermington (2), Forestville, Gladesville, Hornsby (2), Hunters Hill, Lane Cove (2), Northbridge, Parramatta (2), Ryde (2), Seaforth, St. Leonards (2), Bondi, Dee Why, Naremburn and Pennant Hills West.

HIGH INCIDENCE OF DEATHS FROM POISONING IN CHILDREN

A campaign to lower the incidence of poisoning in young children was introduced into Baby Health Centres in 1963. It is realised that the mothers must be constantly reminded of the hazards which exist for the young child in every home unless adequate steps are taken to protect the infant. Baby Health Centre Sisters were instructed to advise every mother about the precautions they should take and reinforce this advice by reminders at frequent intervals. Medical Officers from the Division appeared on television and gave broadcasts on this subject.

IMMUNISATION

Baby Health Centre Sisters have always made a valuable contribution in ensuring that mothers who attend Baby Health Centres are advised to have their babies immunised against Diphtheria, Whooping Cough, Tetanus and Poliomyelitis.

The inadequacy of the immunisation status of children was highlighted during the year by an out-break of Diphtheria in the Metropolitan Area and the Newcastle Health District which resulted in two deaths. Enquiries revealed that those children affected had not attended a Baby Health Centre and had received no form of immunisation.

Conferences were held with the other medical authorities concerned within the Department to standardise the advice given by general practitioners and public health authorities concerning the time of first administration, the intervals and the scope of immunisation at each injection.

Tabulations concerning this standardised advice on immunisation was then made available to all Baby Health Centre Sisters.

It is realised that efforts should be made to intensify the health education programme on immunisation by arranging where possible for Baby Health Centre Sisters to visit the homes of the Mothers of all babies in their district and again at the age of 6 months, if the Mother had not attended the Centre. One of the special purposes of this visit would be to ensure that the baby had begun immunisation and if not, to advise the Mother of its importance and the facilities available to her. The Nursing Staff is not yet available for this work.

Immunisation of Children at the Sand Hills Aboriginal Reserve

As the result of a report from the Sister in Charge of the Narrandera Baby Health Centre concerning the lack of Immunisation of the children at the Sand Hills Aboriginal Reserve a conference was held with the Departmental Representative of the Aborigines Welfare Board.

Recommendations were made to the Board that an Immunisation Campaign should be organised and the assistance of the Sister in Charge of the Narrandera Baby Health Centre was offered.

A Divisional Medical Officer then visited the Reserve and conferred with the local Medical Practitioners who, though unwilling to co-operate with the Local Council, agreed to participate in this Campaign.

The information concerning the number of children to be immunised is being collected by the Sister in Charge of Narrandera Baby Health Centre, and it is anticipated that the Campaign will begin shortly.

HOSPITAL VISITING

Baby Health Centre Sisters make regular visits to the Obstetric Teaching Hospitals, to the Obstetric Units attached to suburban and country District Hospitals, and where requested, to Private Obstetric Hospitals.

The purpose of Hospital Visiting is to acquaint new mothers with the Baby Health Centre service and the advice which they may receive from specially Trained Mothercraft Sisters who will assist them in their problems of feeding and management when they leave Hospital.

Additional hospitals have been visited during the year both in the city and the country and it is anticipated that all Obstetric Hospitals in the Metropolitan Area will be included in this service early in the new year.

OBSERVATIONS AND TRAINING VISITS TO BABY HEALTH CENTRES

Facilities are made available to a number of student groups to observe the work of the Sisters in the Baby Health Centres. These include post graduate and undergraduate students from The School of Public Health and Tropical Medicine; The Medical School, the Social Work Department of the University of Sydney, student nurses from the Mothercraft Training Schools, conducted by the Royal Society for the Welfare of Mothers and Babies, the Australian Mothercraft Society and also from several Hospital Training Schools. Graduate nurses engaged in doing an In-Service Training Course in Public Health Nursing and graduate overseas Nurses also make observation visits.

INFANT MORTALITY

The figures for infant mortality from 1935-1963 are shown dissected by age groups in Table VI. Nearly three-quarters of the deaths under one year of age occur in the first 28 days of life and the majority of these occur within 7 days of birth. At these ages the causes of death are mainly antenatal and are similar to the causes of stillbirths.

TABLE VI—INFANT MORTALITY IN AGE GROUPS, NEW SOUTH WALES, 1935-1963

Year			Under one week	1 week and under 1 month	1 month and under 1 year	Total under one year
NUMBER OF DEATHS						
1935	..	..	1,027	213	522	1,762
1940	..	..	1,043	220	664	1,927
1945	..	..	1,127	217	545	1,889
1950	..	..	1,157	188	591	1,936
1955	..	..	1,118	170	562	1,850
1960	..	..	1,109	141	485	1,735
1962	..	..	1,160	161	504	1,825
1963	..	..	1,071	114	488	1,673
RATE PER 1,000 LIVE BIRTHS						
1935	..	..	22.99	4.77	11.68	39.44
1940	..	..	21.12	4.46	13.44	39.02
1945	..	..	18.28	3.52	8.83	30.63
1950	..	..	16.16	2.63	8.25	27.04
1955	..	..	15.03	2.28	7.55	24.86
1960	..	..	13.53	1.72	5.91	21.16
1962	..	..	13.58	1.88	5.90	21.36
1963	..	..	12.74	1.36	5.81	19.90

Infant mortality during the years 1962 and 1963 from causes assigned to the major groups of diseases in the International Classification are set out in Table VII. The table compares the rates in the Metropolis and the remainder of the State.

TABLE VII—CAUSES OF DEATH WITH RATES OF CHILDREN UNDER ONE YEAR OF AGE, NEW SOUTH WALES—1962-1963

Class No.	Cause of Death (a)	Sydney Metro- polis Area		Remainder of State		New South Wales			
		Rate (b)		Rate (b)		Rate (b)		Number	
		1962	1963	1962	1963	1962	1963	1962	1963
1	Infective and parasitic diseases ..	·18	·32	·50	·32	·34	·32	29	27
2	Neoplasms	·07	·14	·09	·07	·08	·11	7	9
3	Allergic endocrine system, metabolic and nutritional diseases	·02	·05	·12	·07	·07	·06	6	5
4	Diseases of the blood and blood form- ing organs	·02	·02	·07	·02	·05	·02	4	2
5	Mental psychoneurotic and person- ality disorders	·11	·02	·02	·07	·07	·05	6	4
6	Diseases of the nervous system and sense organs	·44	·35	·29	·25	·36	·30	31	25
7	Diseases of the circulatory system ..	·05	·05	·05	·07	·05	·06	4	5
8	Diseases of the respiratory system ..	·58	1·71	2·03	1·96	1·80	1·83	154	154
9	Diseases of the digestive system ..	·90	·55	·69	·71	·80	·63	68	53
10	Diseases of the genito-urinary system	·90	·02	..	·05	·05	·04	4	3
12	Diseases of the skin and cellular tissue	..	·02	·05	..	·02	·01	2	1
13	Diseases of the bones and organs of movement	·05	·02	..	·02	·02	·02	2	2
14	Congenital malformations	3·95	3·93	4·05	3·75	4·00	3·84	342	323
15	Certain diseases of early infancy ..	11·54	10·19	13·76	13·27	12·63	11·68	1,079	982
16	Symptoms and ill-defined conditions	·21	·05	·05	·12	·13	·08	11	7
17	Accidents, poisoning and violence ..	·92	·74	·86	·96	·89	·84	76	71
	Total, All Causes	20·13	18·18	22·63	21·73	21·36	19·90	1,825	1,673

(a) Classified according to the Seventh Revision (1955) of the International Classification of Diseases.
(b) Number of deaths per 1,000 live births.

More than three-quarters of the infant deaths are due to diseases peculiar to early infancy and congenital malformations. A more detailed dissection of the causes is given in Table VII above.

SURVEYS

Phenylketonuria and Other Inborn Errors of Metabolism

Conferences were held concerning the use of the Ferric Chloride method of testing urine for the recognition of phenylketonuria and other diseases resulting from inborn errors of metabolism.

Approval was given for a State-wide Urine Testing Survey at the Baby Health Centres in conjunction with Dr. Brian Turner of the Neuropathological Unit at the Ryde Psychiatric Centre. Funds were made available for technical services and supplies. The method of implementing the proposed Urine Testing Survey was then finalised and arrangements made for Dr. Brian Turner to lecture to the Baby Health Centre Sisters before the commencement of the Survey began early in the new year.

Immunisation Status of Babies Attending the Baby Health Centres

At the request of the Director of State Health Services a Survey was made into the immunisation status of babies and young children attending Baby Health Centres.

This investigation was carried out at 12 Baby Health Centres including 2 in the Newcastle Health District.

In the Newcastle Health District it was found that 82.3 per cent of the babies at the selected Centres were in the process of, or fully immunised with Triple Antigen: in the Metropolitan Area the percentage was 80.2 per cent.

Referrals of Babies to Mothercraft Homes

Towards the end of 1963, a Survey was conducted to ascertain the number of babies referred to Mothercraft Homes by Baby Health Centre Sisters. Results are now being compiled.

Clerical Work Measurement Survey

Due to the extreme pressure of clerical work in the Division and the obvious need to revise many procedures, a request was made by the Director for an assessment of the clerical position by a Work Measurement Survey Team.

This Survey was conducted during the latter half of the year by Mr. J. Kendrigan and Mr. R. Lennox of the Public Service Board. The most outstanding recommendation resulting from the Survey was to introduce a Visual Control Panel to record the Metropolitan Baby Health Centres and staffing including the times of opening, normal and abnormal placements of all staff, the relieving staff available and at the same time to record staff movements.

Revision of the filing system and many other changes in methods and procedures were recommended and re-organisation was made of the duties of all the clerical staff involved. The adaptation of some of the recommendations of the Clerical Work Measurement Survey has already been implemented but the Visual Control Panel has not yet been set up.

The work of the Clerical staff which is an integral part of all the activities of the Division has been carried out with interest and efficiency throughout the year.

PAEDIATRIC CLINICS

The Paediatric Clinics conducted by the Division of Maternal and Baby Welfare have in 1963 increased their case load by a further 165 cases on 1962. In the 12 Clinics a total of 1,536 cases were seen, of which 350 required referral.

For the purposes of these Clinics morbidity has been defined as the need for referring a case beyond the Clinic to a General Practitioner, Hospital or Child Health Centre for a specific condition requiring treatment. This therefore gives a morbidity rate of 4.36 per cent for 1963 which is similar to 1962 when it was 4.4 per cent.

The main source of cases sent to these Clinics come from the Sisters-in-Charge of the Baby Health Centres and the major case load is comprised of feeding and emotional problems (see Table VIII). This prompted the change-over of some of the Clinics to Special Referral Clinics at Campsie, Caringbah, Chatswood, Manly and Parramatta, to which specific problems only are sent. It was found that these Special Paediatric Referral Clinics fulfilled a very definite need and private practitioners also referred their difficult feeding problems for counselling. As a result these Clinics were soon overloaded, the waiting lists became very long and it was also found that mothers with young children travelled long distances to attend these Clinics. It became evident that separate Clinics would be necessary to deal with these specific problems and a pilot study was implemented in three areas to determine the need for these Clinics. The final report on this study is not yet to hand, but present indications show that such Clinics would serve a definite need in the community and be greatly appreciated by mothers of young children and Private Practitioners.

The remainder of the Paediatric Clinics at Balmain, Bankstown, Dee Why, Gladesville, Hornsby, Liverpool and Pendle Hill are conducted as previously and the types of problems, age groups handled and relative case distributions can be seen in the attached tables.

The Pilot Study of Paediatric Clinics conducted by Medical Officers from the School Medical Service for these attendances has continued at the Auburn, Dulwich Hill, Granville and Newtown Baby Health Centres: the figures are not available.

TABLE VIII—NUMBER AND DISTRIBUTION OF CASES

Feeding Problems	Emotional	Medical	Surgical	Orthopaedic	Routine Examinations	Miscellaneous
291	296	250	225	285	168	21
Total Number—1,536						
Referrals				Ages		
To Hospitals and other Clinics ...	...	240		Over 3 years ..	..	407
To Private Practice ..	..	146		Under 3 years ..	..	1,129
Cases Counselling at Paediatric Clinics		1,186		Total ..	..	1,536

THE PRE-SCHOOL CHILD

Kindergartens and Day Nurseries

A Pre-School Health Service is provided by the Division for children under school age who attend the 32 Kindergartens conducted by the Kindergarten Union of New South Wales, one conducted by a Local Government Authority, and the 13 Day Nurseries conducted by the Sydney Day Nursery Association Inc.

The Health Service makes provision for the examination of each child at least once during the year and more often if it is considered warranted. The early detection and correction of defects is considered of utmost importance to the total well being of the pre-school child, as uncorrected defects, left until school age, are known to have adverse effects both on physical and emotional health.

These examinations are conducted in the familiar atmosphere of the Kindergarten or Day Nursery. At the first examination the Mother is present wherever possible, and the Director assists the Medical Officer. At subsequent examinations the Director is present and the Mother is invited to attend. Examinations conducted under these conditions afford the Medical Officer many opportunities to discuss a wide range of topics which may have a direct or indirect effect on the child's total well being and allow for the minimum of strain for the young "patient" experiencing a medical examination for the first time.

The number of children examined in 1963 was as follows:—

Kindergarten	1st examinations	1,192
	Reviews	226
Day Nurseries	1st examinations	435
	Reviews	362
		<hr/>
		2,215
		<hr/>

INFANT PAEDIATRIC CONSULTANT SERVICE FOR THE COUNTRY DISTRICTS

One of the recommendations of the Paediatric Advisory Committee, made to the Director-General in 1961, was to establish a Consultant Service available in the country to parents of babies under one year of age. The arrangements for the establishment of this Service are almost completed and it is anticipated that the Panel of Consultants will be appointed early in the new year.

PERINATAL MORTALITY SURVEYS

Perinatal Mortality Survey 1962

In 1962 a Perinatal Mortality Survey was undertaken into foetal deaths and deaths of infants under 28 days (neonatal) which were registered in New South Wales during 1962. The medical members of the Perinatal Advisory Committee were Professor Harvey Carey, Dr. T. I. Cope, Dr. D. Pfanner, Dr. J. Kemp and Dr. E. Burnard. Mr. R. Dibley and Mr. M. Taylor from the Bureau of Census and Statistics.

One of the principle objectives in undertaking this Survey was to assess accurately the causes of death. Individual Questionnaires for foetal and neonatal deaths were devised with questions which would enable a correct assessment of the cause of death to be established.

Other objectives of the Survey were:—

- (1) To continue the investigations of reasons why New South Wales Infant Mortality rate is higher than most of the other States in Australia.
- (2) To encourage the keeping of better records and more careful assessment of the underlying causes of death in the completion of Death Certificates.
- (3) To study the defects in service and facilities for premature babies.
- (4) To follow up certain causes of deaths which had been revealed in the 1958 Survey as being the most important problems to be studied. These were Toxaemia, Antepartum Haemorrhage, Prematurity and Congenital Malformations.

The work in assessing each Questionnaire was time consuming, but unavoidable, if the prime objective of the Survey was to be achieved. It consisted of the following procedure:—

- (1) Each Questionnaire was screened by a Divisional Medical Officer to determine if the recorded information was adequate, and where omissions occurred, efforts were made to procure the information.
- (2) The Bureau of Census and Statistics carried out the preliminary coding of the cause of death.
- (3) Each Questionnaire was then individually assessed by an Obstetrician or Paediatrician and a decision made as to the actual cause of death.
- (4) Where any problem arose in making this decision, the individual cases were discussed and assessed by the Perinatal Advisory Committee.

Throughout the year there has been close co-operation with the Bureau of Census and Statistics, which has assisted the Division in the design of the form of the Consultant Assessment Sheet and has been responsible for the coding of the cause of death on each completed Questionnaire and has undertaken to transfer selected information from the code sheets to the punch cards and the subsequent preparation of Tables.

All causes of death are being coded to the Perinatal Mortality Classification which was devised in 1962 by the Bureau of Census and Statistics as a possible replacement for Section XIV, XV and “ Y ” of the Manual of International Classification of Diseases, Injuries and Deaths. It is also designed for the joint tabulation of foetal deaths, and deaths of live born children aged less than 28 completed days.

The Perinatal Classification comprises the following:—

- (1) List of Categories—(cause of death).
- (2) Conversion table for use with the International Classification of causes of Stillbirth.
- (3) Conversion table for use with the International Classification of Causes of Infant Deaths.

The conversion tables can only be used for the conversion of individual cases, and cannot be used to convert tabulations of causes of foetal deaths or causes of death of live born children.

The classification also consists of a four digit category, the fourth digit being added to indicate whether foetus or baby was immature. All cases are being classified to the maternal cause, if it is considered that the underlying factor causing death originated in the Mother.

The last notifications of foetal and neonatal deaths were not completed until March, 1963, and the information which related to the 1962 Perinatal Survey continued to be assessed until November, 1963. The assessment of all forms is now completed and selected information is being extracted from the code sheets and recorded on punch cards.

The proposed tables are being considered and it is anticipated that these will be available early in 1964.

Full co-operation was received from the Obstetric Hospitals in New South Wales in the completion of the foetal and neonatal death questionnaires of public patients and also from medical practitioners in completing private case histories. The medical officers of the Division and the Medical Officers of Health in Health Districts also assisted the Survey by obtaining detailed information required by the Consultants.

Perinatal Mortality Survey, 1963

A further survey was undertaken to investigate all foetal and neonatal deaths registered in New South Wales during 1963. This was restricted to basic data similar to that likely to be required on the proposed compulsory Death Certificate which is at present under consideration by Federal and State Authorities. The Survey protested this compulsory Death Certificate on a voluntary basis. The form used for this Survey, consisted of a single abbreviated sheet, with specially designed questions on breathing to assess the problems arising from definition of normal breathing and the significance of questions on resuscitation. The Medical Assessment required was therefore reduced to the minimum and all other work involved has been carried out by the Bureau of Census and Statistics. Data will be made available to the Department for special follow-up investigations.

The findings of both the 1962 and 1963 Perinatal Infant Mortality Surveys have still to be formulated and evaluated, but several benefits have already resulted from these Surveys:—

- (1) The experience gained during the 1962 Survey assisted in the compilation of many of the recommendations on coding of causes of death sent to the World Health Organisation by Australia.
- (2) The design of the compulsory Perinatal Death Certificate now in use in the Australian Capital Territory was materially influenced by the experience gained during the 1963 Perinatal Mortality Survey in New South Wales.
- (3) The new classification of Stillbirth and Neonatal causes of death designed by the Bureau of Census and Statistics.

DIVISIONAL PUBLICATIONS

The following booklets are prepared for publication in this Division: *Our Babies, Healthy Motherhood, Infection of the Newly Born and Care of the Premature Baby*, and *Obstetric Practice in New South Wales*.

In 1963, *Healthy Motherhood* was revised and minor alterations were made to bring this publication up to date. The booklet has a wide distribution and approximately 80,000 copies were distributed to expectant mothers, Obstetric Hospitals, General Practitioners and Specialist Obstetricians.

During 1962 *Our Babies* was completely re-written and the new edition was available for distribution early in 1963 and this booklet has a wide distribution not only in this State, but in New Guinea and the Pacific Islands. The demand was greater than expected. This necessitated a further reprint in 1963. The reprint afforded the Division the opportunity of amending the section on Dental Health in accordance with the latest recommendations made by the Fluoridation of Public Water Supplies Advisory Committee.

The booklet *Obstetric Practice in New South Wales* is a valuable publication which is widely used and appreciated by the practising profession, particularly by Practitioners in the more remote country areas. It includes detailed descriptions of the Management of Haemorrhage in Pregnancy, the care of the Rh negative Mother and her baby and the safe administering of Anaesthetics in Obstetrics. The distribution is limited to Medical Practitioners, Senior Medical students, and Obstetric Hospitals.

Infection of the Newly Born and Care of the Premature Baby, is a booklet which is used widely and has proved of value to Hospitals, particularly in respect of the control of staphylococcal infections.

During 1963, a Monograph was published on "Deaths Under Anaesthesia in Obstetric Practice". The booklet was prepared by members of the Special Medical Committee Investigating Maternal Mortality with the co-operation of the members of the Special Committee Investigating Deaths under Anaesthesia. It includes the case histories of 20 women, the deaths of whom occurred during 1957 to 1960, and could be attributed primarily to errors of judgment or management in the administration of a necessary anaesthetic. The case histories are factual, but have been subject to minor alteration to preserve the anonymity of both the patient and the doctor.

The Monograph is for distribution to all medical practitioners in New South Wales and it is anticipated that the comments and conclusions will prove beneficial in guiding practitioners in the management of a similar case.

ACKNOWLEDGMENTS TO HEAD OFFICE STAFF

The diversity of the activities carried out by the Division of Maternal and Baby Welfare which involves medical responsibility and action, can be appreciated from the foregoing data.

This however does not convey the extraordinary variety of responsibility in communications which in addition devolves on the Medical Staff of the Division. Without devoted and intensive work on the part of all members this could not be carried out to the credit of the Department.

I have received throughout the year the most constructive and able assistance, particularly from the Deputy Director and outstanding co-operation from all other members of the Medical Staff.

My special thanks are extended to the Senior Clerical Officer and other members of the Clerical Staff who throughout the year so ably supported, in all avenues of the work, the Medical Staff and the Nurse Inspectors. Appreciation of the work of the Nurse Inspectors and the Baby Health Centre Sisters has already been expressed elsewhere.

Division of Occupational Health—Annual Report, 1963

STAFF

Director: Dr. ALAN BELL, M.B., B.S., D.I.H.

Senior Medical Officers—2.

Adviser—Industrial nursing—1.

Officer-in-Charge, Radiation Branch: Mr. H. M. WHAITE, B.E.

Principal Air Pollution Control Engineer: Dr. J. L. SULLIVAN, Ph.D., M.Sc., F.S.T.C., A.M.I., Chem.E., A.R.A.C.I.

Senior Scientific Officer, Industrial Health: Mr. A. T. JONES, B.Sc.

Scientific Officers—11; Fuel Engineers—1; Chemical Engineers—1; Chemists—2; Field Engineers—6 (3 vacancies); Demonstrator—Human Kinetics—1; Radiation Inspectors—2; Laboratory Assistants—5 (2 vacancies); Photographic Assistants—2; Analyst-in-training—1; Science Trainees—(2 vacancies); Fuel Technology Trainee—1; Field Assistants—6 (3 vacancies); Laboratory Attendant—1; Clerks—3; Office Assistants—4; Stenographer—1.

The numerical strength of the Division is now 57, compared to 40 in 1962. The majority of this increase resulted from staffing the Air Pollution Control Branch, formed last year in order to meet the Department's new statutory responsibilities in this important field of environmental health. Other appointments included two laboratory assistants, thereby enabling us to increase our activities in noise, ergonomics, and the testing of items of personal protective equipment.

VISIT OVERSEAS

The Director was invited to participate in the International Symposium on Medical Labour Inspection, held in Geneva, Switzerland. This was convened by the International Laboratory Organisation in co-operation with the World Health Organisation. The agenda included:—

- (a) the role, functions and responsibilities of the medical labour inspectorate;
- (b) the technical and administrative powers required by the medical labour inspectorate in order to perform its duties effectively;
- (c) the training required by medical practitioners assigned to medical labour inspection and necessary or desirable facilities for providing such training.

Whilst in London, he interviewed staff for the Air Pollution Control Branch. He also made a short visit to the Max Planck Institute fur Arbeitsphysiologie at Dortmund, Germany, to learn of their activities in the field of ergonomics, and in particular the techniques used to assess the physiological cost of work.

OFFICE AND LABORATORY ACCOMMODATION

During the year an extra 5,000 square feet of office and laboratory accommodation was made available to the Division. Most was allocated to the Radiation and Air Pollution Control Branches. Work has also been completed on a noise laboratory, a small workshop, and on the laboratory in which items of personal protective equipment are evaluated. Work is proceeding on the installation of an X-ray machine which will be used for radiation calibration purposes.

Many meetings have been held with the architects in connection with the designing of our proposed new offices and laboratories at Lidcombe. The modern building to be erected will be shared partly with the Government Analyst; it will be located adjacent to the Department's Institute of Clinical Pathology and Research at Lidcombe.

REPRESENTATION ON COMMITTEES

With the following additions, the Division's participation is the same as last year:—

Dr. Alan Bell—

- (a) Exploratory panel, of the Standards Association of Australia, on Human Factors Engineering. Terms of reference for this Advisory Committee were finalised.
- (b) Interdepartmental Committee for the assessment and approval of items of personal protective equipment. (Also Mr. J. Hughes.)
- (c) Public Health Engineering and Health Inspection Certificate Course Advisory Committee. (Also Mr. H. R. Weston.)
- (d) Committee on Advisory Course in Medical Radiography. (Also Mr. A. Smith.)

Mr. J. Hughes—

- (a) Standards Association ad hoc Committee to review Safety Helmet Standard Z10.
- (b) Ad hoc Committee on the rescue of persons from lethal gases; convened by Chairman of Ambulance Transport Service Board.

Mr. A. T. Jones—

Subcommittee on the effects of ventilation, water sprays, and wetting agents in coal mines.

Mr. H. R. Weston—

Attended a meeting on acoustics, convened by the Standards Association of Australia. One of the main aims was to decide in what particular areas the development of Australian standards should be considered.

STATISTICAL DATA

The following table summarises our main activities, classified into several broad categories:—

Type of Activity	1961	1962	1963
1. Medical—			
Number of patients examined	1,228	1,046	1,124
Blood slides examined for evidence of lead poisoning—			
(a) Slides examined by or sent by medical officers working in factories where a lead process is carried out	3,286	7,042	8,256
(b) Slides of men examined at the Division	620	460	451
Number of other pathological tests carried out	4,232	3,877	4,128
2. Scientific—			
Number of "Industrial Health" visits	1,172	1,580	1,203
Number of "Radiation" visits	311	210	425
Number of "Air Pollution" visits	304	430	566
Number of Theatres and Halls inspected	9	6	4

The increase in the number of radiation visits resulted from the appointment of 2 radiographer inspectors; X-ray plants in the premises of many doctors, dentists and veterinary surgeons premises have been visited.

Because of Staff increases in the Air Pollution Control Branch, it has been possible to increase the number of investigations carried out.

The following table shows the various aspects of "Industrial Health" for which comparatively large numbers of visits have been made.

Nature of Visit	Number of Visits
Agricultural Health	121
(a) Orchards	58
(b) Market Gardens	27
(c) Nurseries	26
(d) Farms	10
Dermatitis	56
Dust problems	87
Ergonomics	286
(a) Thermal comfort and ventilation	212
(b) Physiological responses to work	38
(c) Machine and process design	18
(d) Automation	18
Industrial Nursing	71
Noise	176
(a) Industrial	86
(b) Residential	90
Toxicology	264
Ventilation	49

EDUCATIONAL ACTIVITIES

(a) Publications

During the year 11 articles have been published, including the following:—

- “The Estimation of Phosphine in Air” by J. G. Hughes and A. T. Jones. *American Industrial Hygiene Association Journal*. March-April, 1963.
- “Acute Trichlorethylene Narcosis” by Dr. E. O. Longley and R. C. Jones. *Archives of Environmental Health*, August, 1963.
- “Modern Pesticides: Using them Safely” by Dr. D. C. Trainor. Report of the 39th Annual Conference, Agricultural Bureau.
- “Tractor Noise and Hearing” by H. R. Weston. Australian Institute of Agricultural Science. March, 1963.

At the invitation of the World Health Organisation, the Director prepared a comprehensive report on “The problems of Occupational Noise with reference to certain aspects of community noise”.

(b) Departmental Publications

Air Pollution by Metallurgical Industries by Drs. A. Bell and J. L. Sullivan.

The Use of Epoxy Resins and the Danger of Dermatitis—booklet.

A Guide to Respiratory Protection has been prepared and will be published early in 1964.

Notes for guidance of persons and organisations engaged in the transport of radioactive substances.

Code of Practice for Industrial Radiography.

X-Ray Safety and the Dentist. Illustrated booklet about “Surpack” dental assessment scheme.

LECTURES

A total of 81 lectures was given to a wide variety of audiences. For example Messrs. Weston and McLellan participated in a symposium on Environment and Efficiency organised by the Sydney University Chemical Engineers Association; Dr. D. C. Trainor gave lectures on the safe use of pesticides at the second Australian Fruit Conference and at the 39th Annual State Congress of the N.S.W. Agricultural Bureau; and Dr. J. L. Sullivan to the Royal Society of N.S.W. on Air Pollution.

The convenors of the 1963 N.S.W. Safety Convention introduced a women's session which lasted one full day during the Conference. Miss Roach, the Division's Adviser—Industrial Nursing, was invited to Chair this session.

As in previous years we participated in the training of newly appointed factory inspectors. A two day course for senior inspectors was organised so as to acquaint them with recent developments in Occupational Health.

We have also trained a number of people in the techniques of dust counting.

As in previous years, many lectures have been given to factory inspectors.

Owing to the increasing interest in noise problems in residential areas, at the request of the Health Inspectors Institute, a post certificate course was commenced at the Sydney Technical College; 70 students attended.

SPECIFIC ACTIVITIES

Industrial Health

Medical Services on the Waterfront

Because the use of various types of tractors in the holds of ships is frequently the cause of labour disputes, the Division trained several representatives of the Australian Stevedoring Industry in the use of carbon monoxide detector tubes. This enables rapid on the spot estimations to be made.

We have been called upon to give our opinion concerning working conditions resulting from the handling of a wide variety of cargoes such as zinc fluxes, paraformaldehyde, various dyes, and maleic anhydride, etc. Several cases of dermatitis and conjunctivitis occurred whilst handling Ramin logs; these resulted from the bark giving off a dust which contained needle like crystals.

Dermatitis

During the year we received 107 notifications of industrial dermatitis. We investigated approximately 50 per cent of these and where necessary made control recommendations.

The Division is currently trying to develop methods of assessing the suitability of various types of hand cleaners. There are many difficulties but in view of the importance of being able to give advice in specific cases, it is hoped that the forthcoming year will see progress.

Lead

The control of lead dust and fumes continues to be a major section of our toxicological activities. Its importance may also be judged by the large number of stipple cell counts which are examined each year.

Industry	Number of Slides Submitted			Number of Slides with Stipple Cell Counts of					
	1961	1962	1963	3,000—5,000			5,000 or more		
				1961	1962	1963	1961	1962	1963
Battery works	2,927	2,184	2,483	218	111	145	76	69	35
Manufacture of lead compounds	1,324	3,061	3,582	219	475	399	98	199	200
Miscellaneous other users of lead ..	1,436	1,797	2,191	144	175	106	80	69	27
Totals	5,687	7,042	8,256	581	761	650	254	337	262

It is still not uncommon to find situations where there are very high breathing zone concentrations of lead; for example unloading bags of lead oxide into a hopper, 5.1; repacking of red lead into small containers, 5.6; the hand scooping of lead oxide, 46.8; using compressed air hose to remove lead dust, 9.1.

All results are expressed in mg. of lead per cubic metre of air. Fortunately most of such types of exposures are of short duration.

Chrome

An investigation was carried out with respect to the spraying of chromium oxide onto metal, in a manner somewhat akin to metallising. The high spraying temperature of about 3,000°C is achieved by air-acetylene flame. As our samples were found to contain chromium oxide equivalent to 0.8 millig./c.m., expressed as CrO₃, we required this process to be carried out under good local exhaust ventilation.

Mercury

At a factory manufacturing several inorganic mercurial compounds, breathing zone concentrations of up to 2.13 mg/cubic metre of air were obtained during packing and weighing. Although two employees had very high urinary mercury, there was no clinical evidence of poisoning.

Cadium

In a factory producing a cadium alloy, breathing zone concentrations up to 12 mg per cubic meter of air were obtained. All chest X-rays of employees were normal; two had proteinuria. The hazard was overcome by engineering modifications to the collecting canopies.

Carbon Monoxide

We have investigated the underground use of diesel operated concrete mixers. As a result of certain engineering modifications, it is possible to use them with little or no carbon monoxide hazard.

Certain diesel fuel additives and the use of catalytic purifiers for petrol driven trucks, such as fork lifts, have been suggested as control measures for carbon monoxide. Their efficiency has also been investigated in many other countries of the world and those who intend to rely upon such devices in confined spaces, should only do so after an independent authoritative opinion has been obtained.

The use of L.P. gas powered fork lift trucks seems to be growing. It is our experience that if the air fuel ratio, as measured in the exhaust with an exhaust gas analyser, is at least 13.6 to 1 then the carbon monoxide content of the exhaust can be maintained at less than 0.2 per cent.

Phosphine

Phosphine exposures were estimated whilst unloading a cargo of ferro silicon. The cargo was dry and dusty and on occasion the typical odour was apparent, particularly when the grab was operating. Concentrations up to 0.5 ppm were detected whilst trimmers were in the hold. We recommended that anybody entering a hold should wear suitable respiratory protection whilst carrying out initial testing and that continuous monitoring should be carried out whilst unloading.

Trichlorethylene

The survey of Trichlorethylene degreasing tanks, started last year, was continued. Many are unsatisfactory because of structural faults; others because of bad operating techniques, especially the fast withdrawal of degreased articles. We have found that although there is not always a significant correlation between atmospheric solvent concentrations and urinary trichloroacetic acid, the latter test is particularly useful.

Although uncommon short lived breathing zone concentrations of up to 650 ppm have been detected, concentrations in the vicinity of 300 ppm are often detected.

Several employees have been seen whose health had been affected. The case history of one is somewhat unusual.

This man had been degreasing for six weeks when he was referred to the Division. He complained of intermittent light-headedness, of being excessively tired and pains in the arms and legs. As his trichloroacetic acid in urine was 40 mg/litre he was allowed to resume work. He returned three weeks later but in the meantime he had been admitted to a metropolitan hospital with a diagnosis of poliomyelitis, because of the increased severity of the pains in his arms and legs. The physician concerned was experienced in infectious diseases. He had practically recovered from his symptoms at the time of his second examination and was allowed to resume work but warned to avoid undue exposure to trichloroethylene. He evidently did not heed the advice because by one week later his trichloroacetic acid in urine had risen from 21 to 135 mg/l; 7 days later it was 285 mg/l. He also had some slight joint pains. At this stage he was removed from all further contact with the solvent with the result that a week later his urinary excretion fell to 45 mg/l.

Another employee, also complaining of joint pains, was involved in a motor car accident and was fined for being under the influence of alcohol. The day before the accident his urinary trichloroacetic acid was 207 mg/litre; there is evidence which strongly suggests that at the time of the accident his blood alcohol would not have been high. One wonders if the known association between trichloroethylene and alcohol was not an important factor in this case.

In one factory metal parts were degreased with trichloroethylene and subsequently welded. Phosgene concentrations up to 4 ppm were detected. The problem was solved by the use of an alternative solvent.

The use of trichloroethylene for soil sterilisation in the culture of mushrooms was also investigated. Atmospheric concentrations were below the M.A.C.

Toluol

We investigated exposures to this material in a large factory commercially engaged in the cleaning of carpets and upholstery. During the warmer months of the year breathing zone concentrations up to 260 ppm were repeatedly detected. Several employees showed a reversal of the neutrophil/lymphocyte ratio.

Probable Acute Benzol Poisoning

An employee was seen who approximately 6 weeks before had been distilling at 100°F large amounts of benzol in a pilot plant over a period of 2 weeks for 5-7 hours a day. It is clear that he received a large exposure as "fumes were all over the place, due to many leakages", it was not possible to do atmospheric determinations.

About 10 days afterwards, while on holidays, he developed large numbers of buccal ulcers and could not eat. The gums were so swollen that the teeth were hardly visible. On detailed questioning he remembers having a pain under the right ribs and that his urine was very dark for about 10 days. He also complained of intense aching of his joints. He was emotionally upset in as much that nothing worried him, which is quite contrary to his normal condition.

Methane Di-Iso-Cyanates

A solution of the above was used to form a rigid foam insulation for the inside of railway carriages. The men applying it wore full protective clothing and air supplied respirators and suffered no ill effects; on the other hand 12 employees working at distances up to 120 feet from the spraying area all developed varying degrees of asthmatical breathing. As far as we can ascertain there have been no previously recorded similar episodes.

Welding

As we continue to receive complaints about suspected hazards to health from the use of various types of electrodes, we have carried out more tests to determine breathing zone concentrations of total fume, manganese and fluorides inside the welder's helmet on 12 different types of rods. The results show that provided there is reasonable ventilation, there is usually little or no danger.

However, this is not always the case. For example, of 11 men welding in the open air, the columns of constructional steel work in a large modern office block, all developed sore throats, sometimes quite severely, with oedematous uvulae. Four also developed conjunctivitis and a cough. The symptoms disappeared at weekends, returning on Monday mornings. Although tests taken some time afterwards showed that the breathing zone concentrations of total fume, solid and gaseous fluoride products were all below the recommended values, on medical evidence it is difficult to believe that the "fumes" were not responsible.

We have also investigated welding using carbon dioxide to sheath the contact electrode. In confined spaces breathing zone concentration of carbon monoxide up to 200 ppm have been detected.

Dust Hazards

As in previous years we have made several visits to various work sites of the Snowy Mountains Hydroelectric Scheme, in addition to a large number of industries, to determine breathing zone concentrations of a variety of dusts.

It is surprising to find that whereas many firms spend large amounts of money on efficient local exhaust systems to control dust, unfortunately in many, dry sweeping of the factory floor still seems to be the practice. Apart from being bad practice, the potential hazard to the cleaner is often overlooked.

Dust exposures in the manufacture of matrices for acetylene cylinders, from the use of several types of facing powders in foundries, from crushing and separating plants in quarries and mines, from the spraying of asbestos onto metal surfaces of ships, the use of pumice in the manufacture of spectacle frames and the manufacture of pharmaceutical products have been assessed.

Whilst it is true that in most of our investigations siliceous dust concentrations have been found to be below recommended limits, one still encounters very bad situations, as the following particle counts per cubic centimetre of air show: near a jaw crusher—1,200 (300); whilst bagging ground silica—500 (200); whilst cleaning filter bags—2,400 (200). The bracketed figures are the recommended maximal allowable concentrations.

A dust survey of some 36 stone and monumental masons yards was carried out to determine the degree of silica exposures. It was apparent that the use of water fed saws and grinders had become more common and hand work less prevalent. Most sandstone ashlar were delivered to the yards precut and smooth and little hand punching was necessary. Although high dust concentrations were seen in some situations, for example abrasive blasting and the use of pneumatic hand tools, it was apparent that the overall severity of the dust hazard is very much less than in former years.

Occupational Health Nursing

The Division's Adviser visited 71 factories and interviewed a similar number of Occupational Health Sisters; 13 not been previously contacted. Two of her major activities are to encourage more managements to employ such trained staff and to create the atmosphere and conditions whereby they are able to practice preventive medicine. There is evidence which suggests that her views are being increasingly accepted.

It is unfortunate that circumstances are such that only a minority of those entering industry have received any prior specific training. Conditions considerably differ from the time honoured hospital atmosphere, in which most have worked for many years; the transition is sometimes far from easy. This is one of the reasons why we continue to hold our refresher sessions at four monthly intervals, with an average attendance of 80 at each.

At the March session, Management was invited to attend and approximately 25 per cent of the nurses present were accompanied by a representative. In April the first refresher session was held in Newcastle. Of the 20 industrial nurses in this area, 19 attended. At these meetings, lectures on a wide variety of topics are given, such as standards in relationship to protective equipment; heart rates in work and recovery; some aspects of the balance of energy intake and expenditure in man; the role of the laboratory in medical diagnosis; the legal aspects of industrial nursing, toxicology and the motivation of human behaviour.

Unfortunately, because of pressure of work, it was only possible to hold one group study course. Eight nurses participated, the course extending over 6 full days. During this time 25 lectures were given and 5 visits to factories arranged.

Time has been spent, at the request of management, in planning medical centres; on public relations and on surveying possible suitable areas for group industrial medical clinics. With respect to providing adequate medical coverage for workers in factories which individually are too small to provide such services on their own, the difficulties are considerable. Nevertheless, several countries have tried to overcome such difficulties, by the establishment of a central clinic in the midst of a well defined industrial zone. There are, in Sydney, suitable areas for such a scheme.

It is gratifying to record that Miss Roach was elected the first President of the Occupational Health Sisters Association of N.S.W. and A.C.T.

Agricultural Health

The Division continues to see, and hear about, many cases of poisoning resulting from the careless use of various agricultural pesticides. However, as a result of an educational drive by many people and organisations, including ourselves, there appears to be a greater awareness amongst agriculturalists as to the need for care. Nevertheless, much work remains to be done. Because of the importance of this aspect of our activities, we will establish an agricultural health laboratory in the Division's proposed new laboratories, referred to earlier.

Supplies of the 2nd edition of the Department's publication *Agricultural Pesticides: A Synopsis of Toxicology and Treatment* have been exhausted and arrangements have been made for its reprinting.

Thirty-two pesticide factories were visited to ascertain if adequate protective measures were afforded to persons formulating toxic spray materials. In most, conditions were satisfactory. However, one plant had a considerable amount of organic phosphate material (from a takeover) to process and was not initially properly equipped to do so in safety. In another plant formulating similar type compounds, the Division regularly performed cholinesterase tests on operators and laboratory staff until one of the chemists was trained to carry out the testing. Fifteen plant employees and up to 20 laboratory staff were involved.

Cholinesterase Testing

A survey into blood storage methods and subsequent cholinesterase determination was carried out over a period of 2 months in the winter. Blood was stored in heparinised capillary tubes and found to keep satisfactorily at 5°C for several days; at 15-20°C the samples deteriorated after 48 hours. The use of 4 x 100 mm heparinised pyrex tubing, sealed with paraffin wax, is recommended as the tube can be centrifuged and the sample directly pipetted.

Dried blood spots on filter paper were found to store well but only 80 per cent could be recovered. This method is satisfactory for the MacDonald cholinesterase method on whole blood and could be of value for postal service from outlying areas.

The cholinesterase methods of Michel, Fleischer, Limperos and Ranta, MacDonald and Acholest were compared and evaluated. All were adapted to finger prick sample thereby eliminating vein-puncture. In the field, for practical reasons, the Fleischer appeared the best screening test; the Michel Micro variation by Marchand is recommended for subsequent clinical laboratory testing.

Organic Phosphates and Carbamates

Exposure pad tests for some of the widely used organic phosphate and carbamate materials were conducted. Each operator wore 8 pads on various parts of his clothing and a respirator with absorbent pads for several hours while spraying. The pads were removed, analysed and the severity of dermal and inhalation exposures determined. The results are expressed in terms of micrograms per 100 cm²/hour for the dermal pads and in micrograms per hour for respirators.

Our investigations will be finalised early in the New Year and it is hoped to publish.

D.D.V.P.

DDVP is now used in air curtains to control flies in shops. Air samples were collected by the impinger; the highest breathing zone concentrations obtained were only 1/10000th of the estimated human MLD₅₀ at the toxicity of 100 mg/Kg. We have also investigated the use of this insecticide to spray the holds of ships, using a Merino Knapsack Mister.

Mercury

At Orange and Batlow, 28 orchards were visited to determine the extent of exposures to phenyl mercuric chloride whilst spraying for "black spot" eradication. It is apparent that this can be done in safety.

Fumigation

Spot fumigation appears to be becoming increasingly popular. Sometimes hydrogen cyanide is used to treat small infestations; generally a 5 cc jet or spray of 50 per cent solution is applied to a localised area. Concentrations up to 140 ppm of cyanide were detected in some of the treated rooms. Consideration is therefore currently being given to amending the Department's Dangerous Substances Regulations so as to include this technique.

Mixtures of carbon tetrachloride and ethylene dibromide are also sometimes used for the above purposes in flour mills. The speed of the operator in moving from place to place, and the fact that the grain elevator boots are immediately closed, prevented exposures exceeding the maximum allowable concentration.

All the metropolitan methyl bromide chambers were reinspected and 19 Halide Lamps tested. It is apparent that there is an increased usage of the gas for the sterilisation of mushroom compost and packing cases.

The use of methyl bromide for weed eradication on golf and bowling greens was also surveyed. At the moment all, or most, of this work appears to be done by licensed fumigators; because of the potential dangers it is considered that this should always be the case.

Noise

The Division continues to pay a great deal of attention to both the industrial and residential aspects of this problem. Because of the recent completion of a noise laboratory and approval to obtain laboratory assistance, it is hoped that it will be possible to expand our activities, including the carrying out of hearing tests. There is every reason to believe that the incidence of occupationally caused impairment of hearing in many industries is high. For example initial hearing tests carried out by the Commonwealth Acoustic Laboratory, on 5,127 skilled and unskilled workers of all ages, showed that 33 per cent of the total number of ears had losses in excess of 45 DB. This is undoubtedly the largest investigation carried out in Australia; although we have not yet analysed in detail our findings of a smaller number of hearing tests carried out in various factories, preliminary impressions are that they will not differ very much from those quoted above.

There is no doubt that many managers and unionists are becoming increasingly aware of the importance of this environmental factor and that more and more industries try to control the hazard by engineering modifications to the machine or process. It is interesting to record that the new 1962 Factories, Shops, and Industries Act, assented to on 19th December, contains, for the first time a reference to noise control. Accordingly we have given many lectures on the several aspects of industrial noise to inspectors.

In industry we have investigated noise created by centrifugal pipe lining machines; by jig grinders which were causing impairment of hearing; by vibrating hoppers in an engineering fabricating shop; from the descaling of steel; from the use of flay knife dehiders in meat works, from gas booster pumps, from machines cutting plastic materials, from various types of wood working machines, from the use of homogenising machines in milk treatment stations, inside poultry sheds and from the use of boot making machines.

Another investigation showed that the noise heard by the operator from the air entering his protective helmet, whilst shot blasting, was greater than that of the operation. This problem was referred to the equipment manufacturers for a review of helmet design.

In shops and offices we have advised on the control of noise arising from computer machines, from addressographs, from the use of air conditioning systems, and from data processing machines, etc.

Noise problems in residential areas have been investigated at the request of councils and managements. Where measurements have indicated that complaints would normally be expected, the factories concerned have been visited and major noise sources determined.

We have found the noise rating curves recommended by the International Organisation for Standardisation a very useful guide in assessing likely community reactions.

In this category we have also assessed noise levels from dog kennels located on residential areas, and from large refrigeration and air conditioning units situated in hotels and clubs.

Following a fatal railway level crossing accident, measurements were made at the request of the Criminal Investigation Branch of the Police Department, to determine the relative loudness of the warning bell and a boiling kettle in the gate keeper's cabin.

Analysis indicated that while the kettle was boiling it masked out the low and medium frequency noise up to 2,400 cycles per second. We concluded that under certain circumstances the gatekeeper might not have heard the bell ringing.

Personal Protective Devices

Despite difficulties experienced as a result of laboratory alterations, this year has been one of steady progress. A considerable variety of equipment has been tested, particularly air supplied and compressed air breathing apparatus and detector tubes. This comparatively new activity has aroused favourable comment.

Type of Equipment	No. of Items Tested	No. of Suppliers Involved
Airline Respirators and Hoods	6	5
Self-contained Compressed Air Units ..	5	4
Half-face Respirators	3	2
Miscellaneous Cartridges and Absorbents ..	14	6
Skin Cleaners	4	4

Much of the respiratory equipment testing was carried out at the request of the Chief Inspector, Department of Labour and Industry. The Division made recommendations as to the conditions under which such equipment should be approved. An Interdepartmental Committee has been established to deal with the various aspects of this scheme. In only one case did we recommend refusal although in several others, faults in the devices were pointed out and suggestions made for improving design and construction. Details of which makes of respiratory protective devices have been tested are available on request.

At the time of writing, the Division has on order many items of equipment, including a refrigerated syringe feed assembly and a methylene blue apparatus. When these are received, we will be able to develop further this section of our work and we hope to obtain N.A.T.A. laboratory registration.

During the year the deaths of three men occurred in two accidents involving respiratory devices. The Division was asked to examine the breathing equipment used and our reports were evidence at the respective coronial inquiries. The first incident concerned two men and took place in the hold of a ship undergoing fumigation in Newcastle Harbour. The men opened tins of Cynasorb to release hydrogen cyanide gas at the bottom of the hold. One man while attempting to leave via a steel ladder fell, striking the other person and the floor of the hold; he was fatally injured. The second employee, although injured attempted to rescue his mate but collapsed and died from cyanide poisoning due to a serious fault in his respirator.

Because of this accident the Division is examining the types of respiratory device suitable for fumigation work with the object of making recommendations to the Board of Health concerning equipment approval.

The second fatality involved a young Indian seaman who entered a deep tank of a petrol tanker. Examination of the breathing apparatus worn showed it to be in excellent condition and suitable for the work involved. The Coroner’s finding of accidental death due to asphyxia did not give any conclusion as to how the man’s facemask became dislodged but it appeared that a lack of training and experience could have been significant factors.

To investigate the causes of high lead absorption figures of men employed at a large smelting works, several visits were made to demonstrate methods of testing the face fit of half-face respirators. The tests, involving 104 men, showed that 79 per cent could get a perfect facial fit with either one of two locally produced respirators, 47 per cent requiring the smaller size and 32 per cent the larger. The remaining 21 per cent could only be fitted by trial and error with up to 10 different makes and types of respirators. The significant fact is that a man buying a respirator has only a 50 per cent chance of getting one which fits perfectly and is capable of giving adequate protection.

The efficiency of several types of carbon dioxide absorbents for use in self contained closed circuit breathing apparatus have been determined. The tests were designed to determine the rate and amount of carbon dioxide the materials would absorb, the resistance to air flow through the materials, the temperatures developed in the beds and the resistance to abrasion.

In the Director’s last annual report, he stressed the importance of seeking independant authoritative advice concerning the suitability of the several types of gas detector tubes now available. During the last 12 months the following have been assessed.

Tube Recommended to Evaluate	Make of Tube			
	Drager	M.S.A.	Siebe Gorman	Kitagawa
Mercury	X	X	....	....
Trichlorethylene	X	X	....	X
Hydrogen Cyanide	X	X	....	X
Phosphine	X	....	....	....
Carbon Dioxide .. .. .	....	X	....	....
Benzol	X	X	....	....

Our findings show that not all are equally suitable and that some tubes do not live up to the claims made by suppliers.

Ergonomics

With the resignation of Mr. N. J. C. Peres, this activity suffered a temporary set back. During the year we have concentrated less on the engineering aspects and instead have spent more time on matters relating to the physiological costs of work.

Monitoring of Heart Rates

Using the pulsometer referred to in last year’s report, we have continuously monitored the heart rates of many industrial workers for full working shifts. We have shown that several develop fatigue well in excess of levels which overseas investigators have recommended for prolonged muscular exertion. For example the pulse rate of one subject, working in a foundry, reached 190 per minute on 5 occasions during the shift and never dropped below 140 for the whole of the afternoon shift.

Instrumentation on order from overseas, will enable us to pursue this work further and to express our findings in such a way as to be able to give specific advice on the length, suitability and distribution of rest pauses.

Sweating and Dehydration of Industrial Workers

The above survey, involving 138 men working in 42 jobs of which 16 could be classified as presenting heart stress, has been completed. It has been shown that sweat losses are not excessive in some of our heavy industries, but are indicative of physiological strain where heat complicates severe muscular work. Dehydration is widespread, at least half of the men tested in the hot jobs being dehydrated over an acceptable limit of 1.5-2.0 per cent of their body-weight. There is a need for worker education in the hygiene of hot work, to inculcate correct habits of salt and fluid intake.

Sweat loss should be taken into consideration by those setting fatigue allowances for men in hot trades.

Excessively Hot Conditions

During the warm months of the year we were asked to investigate several industries where it was considered that the general ventilation was unsatisfactory and inplant temperatures too high. Some of those studied were electroplating, clothing factories, heat treatment plants, the by-products sections of abattoirs, and in the vicinity of large ovens used for a variety of purposes.

It is apparent that more people are now thinking in terms of air conditioning. This trend is to be encouraged.

Thermal Comfort

We repeatedly receive complaints from industrialists and unionists that certain environmental conditions are thought to be uncomfortable, especially from the point of view of temperature or lack of air movements. Up to date we have been somewhat handicapped in the giving of advice because of the lack of information as to what constitutes the most comfortable conditions in offices (air conditioned and otherwise) and in certain light engineering industries. Several thousand comfort votes have been taken and it is hoped to obtain information on the type and amount of air flow necessary to secure comfort for the majority of workers at different air temperatures and humidities in summer.

Automation

Towards the end of the year, a survey was commenced to try and assess whether there are, or likely to be, health problems associated with automation in local industry. Up to date 18 factories and work places have been investigated. It would seem that the oil, chemical and electricity generating industries are the most highly automated and that some of the display equipment (dials, etc.), and controls (levers, etc.) are not ergonomically designed. Few managements as yet appear to be aware of the significance of bad design. On the other hand more seem to be aware that attention must be given to problems of job design, selection of operators and boredom.

Visual Perception

Visual perception is necessary in almost every occupation but special problems are most likely to arise in certain inspection tasks in some assemblies, especially of fine components and in the reading of dials and other indicators and instruments.

Although for many years there has been a great deal of interest in eye safety and illumination, much less attention has been paid to the “work study of visual perception”, that is the economical use of normal eyes in visual tasks. We intend to study factors such as the time available for seeing, changes in eye accommodation and convergence, eye and head positions and movements. The object is to advise management how to reduce eye and mental strain and fatigue.

Bicycle Ergometer Studies

In investigations on thermal stress and heavy physical work, it is important to determine if physiological fatigue is due to the work or due to the unfitness of the worker. It is therefore necessary to know what is the “average fitness” of Australian workers. Such estimations are being made for 7 categories of workers; the method used consists of monitoring pulse rates of subjects working at a fixed rate on a bicycle ergometer. The index of physical fitness thus measured is the maximum oxygen uptake rate per unit of body weight. This survey will be completed early in 1964.

Industrial Kinesiology

Injuries caused by incorrect methods of manual handling continue to be a major problem. We have continued to give our classes on correct techniques; the following table shows the various types of courses organised by Mr. Himbury, Demonstrator of Human Kinetics.

Type of Course	Number Given	Number Attending
Supervisory	22	641
Job Instructors	13	173
Lecture—Demonstrations	21	1,723
On the Job Demonstrations	22	3,515
Totals	78	6,052

Included in the figures are 25 visits to coal mines where 1,500 men have received instruction; about 18 months ago the miners rejected all attempts at teaching kinetic methods in their jobs.

Lectures were given to the 2nd and 3rd year students of the Hawkesbury Agricultural College.

During the year there were several cases of advice being sought on the question of methods and job procedures to eliminate strain situations.

Technical assistance was given to the Department of Labour and Industry to produce their favourably commented upon 16 mm colour film “Don’t be Strained”; the Coal Mines Industry has also sought our assistance to produce a similar type film. A film strip on this subject has also been produced by the Division.

The Shipowners Accident Prevention Organisation produced a series of twelve posters dealing with kinetic handling of materials on the waterfront. We were consulted in this programme.

Our pioneering activities in this field have attracted attention in many other States; because of this we organised a special training session for many out of State industries.

RADIATION BRANCH

N.S.W. Radioactive Substances Act and Regulations

For 4½ years after promulgation, the Radioactive Substances Act remained unaltered, but on 1st October, 1963, an amending Act came into force. This cancelled the exemption from the licensing provisions of the Act previously granted to medical practitioners, dentists and veterinary surgeons using X-rays only for the purpose of diagnostic radiography. This amendment resulted in a flood of new license applications of which some details will be given later in this report.

Some amendments were made to the Regulations. One consisted of a major revision of Schedule I, which classifies the divers radionuclides into four groups and details for each group the minimum activity legally constituting a radioactive substance. This table now contains 240 entries instead of the previous 88. A series of minor amendments lowered the minimum age for a radiation worker from eighteen to sixteen years, and made provision for appropriate standards of external radiation dosage, and of concentration of radioisotope in drinking water and breathing air. Another incorporated an "additive" principle in connection with the above Schedule I, whereby several sub-licenseable activities of radioisotopes might collectively comprise a licenseable amount. A change in the amount of the prescribed license fee necessitated several minor amendments to the regulations.

Licensing Under the Radioactive Substances Act

The following table shows the distribution of the X-ray and radioisotope licenses for this year (1963) and the preceding one. It mainly differs from previous tables in that, as far as practicable, the "hospital" category has been confined to those persons employed by hospitals (e.g., honorary medical officers are now classified under "medical", but hospital laboratories now appear in the "hospital" category, rather than in "scientific and research") and licenses to sell radioisotopes now appear in a "commercial" category rather than in "industrial". The figures show the total licenses in force—they do not attempt to show the number of new issues and the number of cancellations.

Category	Isotope or X-ray	Licenses as at 31 December, 1962	Licenses as at 31 December, 1963
Medical	X	155	160
	I	76	77
Veterinary	X	1	1
	I	2	2
Hospital	X	9	10
	I	19	22
Scientific and Research.. .. .	X	23	24
	I	92	106
Industrial	X	25	25
	I	78	90
Chiropractic	X	24	28
Commercial	I	24	25
Total		528	570

Mention has already been made of an amending Act removing the exemption from the licensing provisions. This resulted in an influx of applications more than double the existing number of licenses. To cope with them, the following procedures have been adopted:—

- Licenses are primarily issued only to registered persons (e.g., medical practitioners, veterinary surgeons and dentists), except in the case of small country hospitals, where they may be issued to qualified persons such as matrons and radiographers, if suitable medical personnel are not available.
- The premises of veterinary surgeons and general practitioners are being surveyed before issue of a license, and appropriate conditions are being attached thereto for fulfilment by the licensee. These usually consist of a limitation of use of the equipment to diagnostic radiography, and a requirement that specific defects, such as lack of aluminium filtration and errors in collimation, be rectified.
- Hospitals are being inspected on a routine basis; equipmental defects are drawn to the attention of the hospital board, which then takes appropriate steps to rectify them. These defects are not indicated on any licenses held by individuals on behalf of the hospitals.

- (d) The equipment of dentists is being examined initially by a “ survey pack ” method, similar to the “ Surpak ” pioneered by the United States Public Health Service. In the majority of cases, this establishes compliance of the plant with our requirements in regard to collimation, filtration and leakage. As the survey proceeds, the dentists are notified of these, and conditions are attached to each license. The individual dentist is obliged to notify the Radiation Branch when the necessary alterations have been made. A detailed report will be written at a later stage, but present results indicate that approximately 36 per cent of dental units need no modification, 37 per cent require aluminium filtration, 20 per cent require collimation to limit the beam diameter, and 7 per cent require both filtration and collimation.

Field Inspections

The use of ionising radiations continues to increase, particularly in the industrial and scientific fields. During 1962, 210 inspections were made by the Branch; during 1963, the number was 425. This increase can in large measure be attributed to the work of two radiographer inspectors who, after initial training, have been systematically inspecting the X-ray equipment at hospitals, as well as, to a lesser extent, medical practitioners’ rooms, chiropractors’ rooms and dental surgeries. The following table gives a “ breakdown ” into various categories, and discriminates between the use of X-rays and the use of radioisotopes. Most of the visits connected with the latter are made by two of the Branches’ three scientific officers, one the Officer-in-Charge.

Category	Isotope or X-rays	License Inspection	Other Inspections	Total in Each Category
Medical	X I	3 8	6 46	63 ..
Dental	X	3	31	34
Veterinary	X I	.. ..	1 ..	1 ..
Hospital	X I	.. 6	158 8	172 ..
Scientific and Research	X I	7 20	7 10	44 ..
Industrial	X I	2 12	22 42	78 ..
Transport	I	..	10	10
Chiropractic	X	5	15	20
Commercial	X	3	..	3
Totals	X I	23 46	240 116	263 162
Grand Total .. .. .	....	69	356	425

Overseas Shipments

During the year, a directive issued by the Commonwealth Department of Health to its officers required the inspection and monitoring of all radioactive substances entering the country both at the port of arrival, at intermediate ports and at the port of unloading. The Radiation Branch has cooperated in this procedure by providing an officer for this work when no Commonwealth officer was available.

One investigation carried out in its entirety by the Branch was the possible existence of a hazard associated with the unloading of thorium hydroxide concentrates sent from France to the Australian Atomic Energy Commission’s Research Establishment at Lucas Heights, in return for monazite concentrates sent overseas for upgrading. Over a period of approximately ten months, eight shipments totalling between 140 and 150 tons, were unloaded at Sydney wharves. They were contained in 665 steel drums, well sealed but with a small amount of moderately adherent dust on the outside of some of them. Spectrometrically this was found to contain thorium and zirconium. With the exception of one cargo, these drums were shipped in the tonnage well of the vessel. They were unloaded by sling on to the wharf, then conveyed by fork lift truck to the transporting motor vehicles. Except on the latter, manual handling was carried out by members of the Waterside Workers’ Federation. This body had expressed concern at the possibility of the existence of both chemical and radiological hazards. By agreement between the parties, the workmen were issued with protective clothing (boiler suits, mittens, respirators) and film badges, and monitoring was carried out at all phases of the operation. It was estimated that no workmen would receive, on the average, an external dosage greater than 10 millirem per cargo, and it was recommended that no one workman handle more than one cargo per week. Actually, this recommendation was unnecessary, since in no case were any two shipments unloaded less than a week apart.

Inspections of X-ray Installations

Earlier in this report, mention was made of the work being carried out by the two radiographer inspectors. The following tables detail the faults found in hospital and medical installations, and covers a period slightly greater than the calendar year:—

Standard of Installation	Hospital		Radiologists Cardiologists Gen. Pract.				Total	Percent-age
	Radio-graphy only	Radio-graphy and Fluoro-scopy	Radio-logy and Fluoro-scopy	Fluoro-scopy only	Radio-graphy only	Radio-graphy and Fluoro-scopy		
Type of Faults—								
(a) Deficient in filtration ..	12	20	5	4	14	..	55	35
(b) Lack of Collimation ..	1	2	..	2	2	..	7	5
(c) No or defective protective shield	19	23	4	..	..	..	46	30
(d) Defects in protective clothing ..	..	19	2	..	..	6	27	17
(e) Screen Overlap .. ..	..	7	1	3	..	3	14	9
(f) Unsuitable for Fluoroscopy	3	..	..	..	..	3	6	4
Total Faults	35	71	12	9	16	12	155	100
Plants with Faults	25	41	6	4	1	9	95	54
Plants with no Faults	23	33	6	3	1	6	81	46
Total Plants	48	74	12	7	2	15	176	100

It will be observed that lack of filtration was the major single fault found. Fifty-five out of 176 units, or 31 per cent, were thus deficient. This is less than the corresponding percentage (44 per cent) initially found with dental machines, from the “survey pack” films.

Loss of Radioactive Substances

During the year, five such incidents were investigated. Four of them concerned the loss of sealed sources; the remaining one posed a contamination problem which, fortunately, did not become serious. A brief summary of each incident follows.

1. At a leading women’s hospital, 20 milligrams of radium and 40 milligrams radium-equivalent of radon, in four tubes about one inch long, together with dressings, were lost into the toilet from a female patient. No trace could be found in the sewer lines, in the boundary traps, nor at the sewage treatment plant about five miles away. A traverse of the main sewer from the hospital to the treatment plant was deemed impracticable since, over much of its length, it would be impossible to reduce the depth of liquid below about 20 inches. This would reduce the air dosage from the radium to about background. Photographs of the missing tubes and avoids, a description of them and instructions on procedures if found, were circulated to the Metropolitan Water, Sewerage and Drainage Board for the information of its sewer workers.

2. A similar loss, this time of 60 milligrams of gynaecological radium in three tubes, occurred in a large teaching hospital. In this case, the outcome was more satisfactory. The loss was not realised until twenty hours after removal of the radium and dressings from the patient, and a two-hour search located the tubes in the incinerator. They were found to be undamaged.

3. The third loss involved a 2½-curie caesium-137 industrial radiographic source. Because of the weight of its container, this was hoisted by crane to the third floor of a newly-constructed building, whilst the radiographers proceeded upstairs on foot. On lowering on to the floor, the container tilted and, being unlocked, spilt out the “bomb” containing the source which, in turn also being unlocked, spilt out the source capsule. The dogman reassembled the containers but did not notice the source capsule, the absence of which was not detected for some time. Meanwhile, it had been picked up by a workman, who handed it to a leading hand, who, in turn, carried it round in his pocket for about forty minutes. Calculation showed that his maximum skin dosage (to the thigh) was about 800 rems, and his gonadal dose about 6 rems. No significant clinical changes were subsequently observed. As a preventive measure, locking of these source containers is now enforced by the radiographic firm, and monitoring is carried out before and after each transport movement. It is worth noting that the incident occurred despite clear labelling of the source capsule with “DANGER RADIOACTIVE ISOTOPE”.

4. Following notification from the Atomic Energy Commission that a radio-isotope capsule returned to them had been found to be ruptured and the 600 millicurie iridium-192 pellett missing, the Radiation Branch telephoned the responsible licensee, who late that night, managed to contact the two field stations concerned. The pellet was located early next morning at one of them—a northern power station—and was recovered by a construction foreman. In the course of this action, which was unsupervised, he probably received a beta dosage of 300 to 400 rem to the exposed parts of the body, and a significant gamma dosage which may have been even higher, to the feet.

The cause of the incident was fully investigated. The technique used at this establishment is to obtain panoramic radiographs of welds in steam piping, using a source capsule attached to an "adaptor". This in turn is attached to a "positioning wire" of about $\frac{1}{4}$ inch diameter. In this case, the thread of the adaptor had worn, and the device needed replacement. The appropriate procedure was to insert the adaptor-source assembly into a lead change block to give protection, and to loosen a grub screw through a hole in the side of the block. In this case, the work was delegated to a construction foreman who had not been properly instructed. It would appear that he failed to loosen the grub screw sufficiently, and force was used, which resulted in rupture of the aluminium capsule. The 1-millimetre iridium pellet fell to the ground where it lay imbedded in the clayey soil, until recovered sixteen days later.

As a result of this case, the Australian Atomic Energy Commission is insisting on a second encapsulation of each radiographic source supplied by it, and, in this case, on more positive methods of attaching the outer capsule to the adaptor, and the latter to the positioning wire. These attachments are, of course to prevent further loss of radioactive material and possible damage to the inner aluminium capsule. In addition, this Department has insisted on improved methods of handling, training and supervision, as well as on the double encapsulation mentioned above.

5. Early in the year, a firm using a scintillation probe at a refinery to detect gold-198 at the interface between two crudes, found that its instrument was contaminated. The source of contamination was found to be a drop of oil from a 120-millicurie cobalt-60 source belonging to an industrial radiographic company, which was used to check the operation of the monitoring instrument.

Investigation showed that this source was an unencapsulated, plated one, received from overseas about sixteen years ago, which had subsequently been encapsulated by the radiographic firm in a screwed, hexagonal-sectioned, stainless steel outer container. This has been attached to a go-devil, and used for the same purpose as the gold-198, namely to determine the interface between two crudes, but not at the same time. The change in pressure experienced in the eleven-mile journey from the shore installation to the refinery permitted seepage of oil into and out of the capsule via its thread. This oil carried contamination with it as it seeped out. Monitoring was carried out at both ends of the pipeline, and at other places where this source may have been held or used, such as the storage facilities at the headquarters of the industrial radiographic company. A very small amount of contamination was found in the lead container customarily used to store this source; however, a patch of oil containing approximately 50 microcuries of cobalt-60 was found on the ground at the point where the go-devil was normally removed from the pipeline.

Disposal of the unencapsulated source was arranged.

Film Badge Service

The total number of organisations receiving film badges at the end of 1963 was 488, embracing about 2,200 persons, compared with 421 organisations, covering 2,000 persons, at the end of 1962. Their distribution is as follows (the previous year's figures being shown in brackets):

- 40 (36) industrial firms or departments.
- 151 (141) hospital departments.
- 100 (81) private medical practitioners.
- 155 (129) dentists.
- 19 (16) chiropractors.
- 2 (2) veterinary surgeons.
- 20 (15) scientific organisations or departments.

As mentioned in previous reports, the majority of persons change their films monthly. Quite a number of persons, mainly dentists, have dosages so low that they are only monitored once a year, for a three-monthly period, by this method.

Individual cumulative dosage cards are now being kept for all industrial radiographers, and for a number of hospital and other personnel likely to receive high dosages. The following table shows the dose distribution for the year 1963 for the 68 industrial radiographers who were film-badged:

Dosage (rem)				0-1	1-2	2-3	3-4	4-5	Over 5	Total
No. persons	..	..	..	46	7	6	2	1	6	68
Percentage	..	..	..	67	10	9	3	2	9	100

It will be observed that 6 persons exceeded the 5 rem annual dosage permitted by the Regulations. Some of these excesses were a result of minor incidents, rather than a gradual accumulation of dosage over the year.

During the year, the film in use was changed from a lead-backed dental film to a special personnel-monitoring one. This latter gives enhanced sensitivity, but may fog more easily under the hot conditions which exist in inland New South Wales in summer. The matter is being investigated.

Sensitivity and Contrast of Dental Films

Following a request from the Government Stores Department, the Radiation Branch checked eight dental films for base density, fog level, speed and contrast, as a group of factors to be considered in allotting government contracts. The method used was based on the American Standard method for the sensitometry of medical roentgen films. Only one type of developer was used, but determinations were carried out at two kilovoltages (44 KVp and 65 KVp) considered typical of dental X-ray units. About seven different exposures were obtained on each film, and characteristic curves were constructed. The contrast was determined from two points of these curves. Beam strengths were measured using a Victorian *r*-meter. In accordance with the American standard, the film speed was determined as the reciprocal of the exposure (in roentgens) needed to produce a density of 1.0 above the base and fog density. In most cases, the speed at 65 KVp was twice that at 44 KVp.

Some work on these lines is being considered in regard to our own monitoring film. Some is already being done, e.g., the calibration curves carried out on each batch of monitoring film throw light on the speed of the film at different photon energies and also give an indication of the contrast, but this throws no light on the increase of fog level with increasing storage time, particularly, as mentioned above, under the conditions prevailing inland during the summer months.

Liaison with the Australian Atomic Energy Commission and the Commonwealth X-Ray and Radium Laboratory

The close liaison existing with these two bodies is being maintained. This Department supplies them with information concerning licensees and the conditions attached to their licenses; in return the ordering and dispatch of all radio isotopes are notified to the Department.

In the scientific and technical field, the officers of the Radiation Branch have continued to co-operate with the officers of these organisations, and a number of the field investigations made during the year arose as a result of this co-operation.

AIR POLLUTION

In the air pollution field the major events during 1963 were the drafting of Regulations by the Air Pollution Advisory Committee and the further recruitment of staff to bring about the virtual completion of the Air Pollution Control Branch. In the Annual Report of 1962, it had been anticipated that the Regulations would have been completed during 1963, but decisions on many points—particularly those relating to the establishment of emission limits—required much more discussion with outside industry than had been envisaged earlier in the Sub-Committee's work. By the end of 1963, firm decisions had been made on all limits and it was believed that those chosen were as stringent as possible, but practicable means were available to meet them. These points are discussed further in the section dealing with the Air Pollution Advisory Committee.

The main development of the Air Pollution Control Branch took place during 1963 and recruitment and initial training of staff was a major activity. At the end of 1962, all senior appointments had been made and the Branch was ready as an administrative unit to begin full development. At the beginning of 1963 there were 3 engineers, including the Principal Air Pollution Control Engineer, the Fuel Engineer and the Chemical Engineer, two Scientific Officers and 4 ancillary officers, but by the end of the year the number of staff members had increased to 8 engineers, 4 other academically trained technical personnel and 10 ancillary officers, including field assistants, laboratory assistants and clerical staff. The only major appointment which had not been made during 1963 was a field engineer for the Newcastle area, but it was expected that this would be done early in 1964. In addition, plans were in hand for the recruitment of 3 further field assistants in the early part of 1964. Further details of the activities of the Air Pollution Control Branch are contained in a later section.

As Councils and other organisations learn of the Department's capacity to undertake measurement surveys more and more requests are received, but owing to the need to keep this work within reasonable proportions, new monitoring was only undertaken in selected cases and where possible it was endeavoured to counter these by withdrawing instruments in the areas where it was considered sufficient information had been collected.

Monitoring at certain points over a long period is considered to be an essential part of the Branch's work in the field of air pollution. Without such information it is not possible to assess the severity of any particular local problem and also there is no means of objectively assessing trends in air pollution which might result from increasing or decreasing industrial development or from the application of air pollution control measures. The knowledge which has been accumulated since measurements were begun in this State in 1953 will enable the future progress of the Clean Air Act and the Air Pollution Control Branch to be assessed. Further details of the monitoring stations and discussions of individual problems will be dealt with in their respective sections.

Air Pollution Advisory Committee

During 1963, the major activity of the Air Pollution Advisory Committee was concerned with the drafting of Regulations under the Clean Air Act of 1961. This was a very complicated task and the Sub-Committees, which were responsible for the bulk of the drafting, had many meetings and discussions with representatives of industry and experts in the field of air pollution control. As there was no clear precedent to control by emission limits, it was necessary to be very sure that the

standards chosen provided the degree of control desired, but also they could be achieved. The only model which was available to the Committee was the British Alkali Act which has only fixed limits for a very small number of industries. In the majority of cases in the British legislation, control is by the "best practicable means" clause and to administer this, the Chief Alkali Inspector has a series of what are termed presumptive limits. This means that non-compliance with any set limit does not mean an automatic breach of the law.

In New South Wales this principle has been taken a step further by incorporating the limits in actual legislation and therefore this places greater responsibility on industry to meet the requirements laid down in the Regulations. Consequently, the Committee considered that it was necessary that the actual limits be decided upon with great care and that it was necessary also that there should be some way of allowing for those cases which presented exceptional difficulties in instituting control. At the close of the year the work of drafting the Regulations had reached the final stages and it was anticipated that they would be gazetted in early 1964.

Two new Sub-Committees of the Air Pollution Advisory Committee were formed during 1963 namely, the Medical Sub-Committee and the Publicity Sub-Committee, but no meetings took place. It was considered that the work of the latter Committee would become important as soon as the Regulations under the Act became effective and it was expected that acceptance of the legislation would be facilitated by suitable publicity.

Air Pollution Control Branch

By the completion of the year this organisation was virtually complete and ready for the introduction of the Regulations. Although, the system of licensing of scheduled industries will not come into effect until Division I, Part III of the Act is proclaimed, field engineers were assigned definite districts and a start was made upon the system of routine visits. By this means, engineers began to establish contact with the industries in which they would have the responsibility of implementing the Clean Air Act.

As the Regulations had not been completed, engineers devoted the greater part of their attention to complaints about specific sources of pollution. Each engineer investigated complaints received in his assigned area and in order to introduce the new staff members to their work each investigation, except those of a minor nature, was usually made in conjunction with one of the three senior engineers. All engineers had been chosen for their general experience in industry and for their knowledge of certain air pollution control problems, but there were many types of industries with which they were completely unfamiliar and it was necessary for them to be introduced to the particular methods of solving problems in such cases. This approach will continue into the future as it will be necessary for the engineers to be trained further before they will be in a position to understand all of the many industries with which they will be coming into contact.

In the scientific work of the Branch the major development during the year was the establishment of two small teams to undertake the testing of emissions from chimneys. One team, which consisted of a scientific officer and two field assistants, was formed to measure solid emissions from stacks and the other, which consisted of a chemist and a trainee chemist, started the measurement of chemical emissions from chimneys. The work of the two groups differs considerably. In the first case, the measurement of solid emissions can only be conducted by a very lengthy procedure where precise sampling by isokinetic means is of major importance and departures from set procedures would nullify results. Each single evaluation of an installation required at least a full day and sometimes, in complex cases, investigations spread over several days. In every test made during the year a full record was made of the operating conditions of the installation, such as, for example, the load on a steam raising plant or the type of fuel in use at the time of the test.

Before testing boiler installations and similar fuel sources a preliminary evaluation was normally made by an engineer, who laid the ground work by arranging for whatever facilities were needed to undertake the test and deciding what special measures were needed while it was being carried out.

When the results were obtained from each test, a report was prepared by an engineer and recommendations concerning any necessary control measures were made. Although, the work was only started during the year one firm has already installed fly-ash control equipment as a result of the Branch's tests and several other firms were planning to do so.

The chemical emission testing team was formed very late in 1963 and had not begun to carry out tests in factories before the end of the year. All of the work which was done was concerned with the development of techniques for the measurement of impurities in stacks and calibration procedures. These had reached the stage by the end of the year where it could be envisaged that actual testing would begin in the early part of 1964.

Clean Air Conference

The final printed copies of the Proceedings of the Clean Air Conference held in February, 1962, were received early in 1963 and were distributed to participants of the Conference. Quite a number of additional copies were ordered separately by various persons and organisations and a steady flow of orders continued throughout 1963. The thirty or more papers which had been presented at the Conference were printed in two volumes and although the bindings were paper, the format was quite attractive. Many of the overseas recipients expressed great surprise at the high quality of the papers and the way in which the proceedings were presented. In addition to the copies sent in response to orders, a number were distributed gratis to overseas libraries and institutions, many of which had helped the Department in the past with free publications.

Monitoring Stations

The results of measurements of dust-fall, smoke density and sulphur dioxide are shown in the tables contained in this report. All locations shown are considered to be representative of the areas in which they are situated and are not unduly influenced by nearby sources of pollution. It is the Department's intention that in future all published lists of air pollution results from instruments which have been located to assess particular sources of pollution will not be included. This is to overcome some of the confusion which has been apparent in the past where high individual readings have been reported in clean suburbs because of the proximity of instruments to specific sources of pollution.

Although it has not been possible to analyse results of deposit gauge measurements made in 1963 in detail, it is apparent that the downward trends in Sydney and Newcastle have continued. These changes can be partly attributed to the changing patterns in fuel usages and industrial methods, but some of the improvement has been achieved by the introduction of better air pollution control facilities. In Port Kembla and nearby areas, the same reduction is not observed and indeed the dust-fall in some areas increased. However, there is no doubt that substantial improvements will be achieved in the next year or two as the full impact of the Clean Air Act takes effect. Plans which are now being made by the major companies in the industrial areas to reduce pollution should have a marked effect on dust-fall and other forms of air pollution.

Specific Air Pollution Investigations

It is the usual practice in the Annual Report to describe those air pollution investigations of more than usual interest or those which relate to problems of a major nature. Minor problems are included where they relate to types of installation which occur in large numbers and also where some improvement or positive results has been achieved. A section of those encountered in 1963 is as follows.

Heavy Clay Industries

There are about 90 heavy clay works in New South Wales and the majority of these are situated in the City of Sydney. Brick has been a traditionally popular building material in Sydney for many years and up to very recent times all of the works which had been established were very old. Firing methods were mostly antiquated and smoke and soot problems were very common. This position has not changed to a great degree but there are signs of a general improvement.

Prior to World War II there were few air pollution complaints concerning brickworks as most of them were in relatively unsettled parts of Sydney and firing procedures were more protracted than at the present time. However, with the rapid population expansion of Sydney in post-war years and the more intensive production methods now used smoke and soot problems have become a frequent source of complaint. Works which were previously surrounded by open country now have residential neighbours living in modern homes and complaints about the industry are probably more common than any others received by the Department.

In recent years, work on the development of improved hand firing methods by officers of this Department has shown that very significant improvement in the emission of smoke is possible. There are obvious limits to what can be achieved in this direction because of inherent difficulties associated with a manual firing process but significant improvement is possible. A number of works have been induced to adopt improved hand firing methods during the past year. However, there are still works which continue to apply traditional methods and these result in the emission of smoke of maximum density for long periods. Tests to control soot emission were carried out during the year and have shown that improved hand firing techniques do not provide a completely satisfactory solution to this problem when medium and high volatile coals are fired. While hand firing continues, the only satisfactory course found was the use of low volatile fuels during the steaming and preheating stages. There has been considerable resistance by most ceramic works to the use of fuels such as coke for kiln firing. Their objections are mainly directed towards the higher cost of this fuel and the cost of handling two fuels. However, coke at a much reduced price to this industry has recently become available and more progress is expected in future.

Possibly the most significant development in the control of smoke and soot emission from the ceramic industry during the past year are as follows:—

- (1) The bringing into full production of a number of tunnel kilns for the firing of texture and other facing bricks.
- (2) The production of dry press face bricks in Hoffman type continuous kilns.
- (3) The installation of underfeed stokers on a number of intermittent kilns for the production of earthenware pipes, texture bricks and refractories.

Two tunnel kilns at one works reached a combined rated capacity of 800,000 bricks/week a few months ago. These kilns produce a high quality texture brick for which there is an increasing demand and an additional kiln is planned for the near future. They are oil fired and they operate without smoke or soot emission. Tunnel kilns are also operating smokelessly at two other works.

Sulphur Dioxide Fumes in the Cockle Creek-Boolaroo Area

This particular problem deserved noteworthy attention because some progress was made towards solving what had previously been a rather serious sulphur dioxide emission problem. Complaints had been made over a period that sulphur dioxide gas frequently caused nose and throat irritation and damage to vegetation in the settled areas in the vicinity of the Sulphide Corporation.

Previously these had been very hard to assess, but early in 1963 an automatic sulphur dioxide recorder was installed at a new site in the town and it remained there until the end of the year. In the early part of the survey it was revealed that peaks of relatively high concentration occurred from time to time. These were usually of brief duration and it was not considered that they would be responsible for adverse health effects, but it was confirmed that the effects would be unpleasant and that vegetation damage could easily result.

When the results were made known to the Management of the Company a subsequent search revealed that a previously unsuspected source of escape of the gas was occurring and steps were taken to prevent it. An immediate improvement took place and for a long period no undue concentrations were recorded on the instrument. However, the position deteriorated slightly towards the end of the year as a result of increase in superphosphate and some overloading on sulphuric acid plants, but the concentrations recorded were considerably less than those obtained earlier in the year.

To meet this situation the Company was asked to consider the introduction of a system of meteorological control by which activity would be reduced in periods of winds blowing towards the settled areas. The Company promised to do this and also to investigate the possibility of installing stacks of considerably greater height in order to disperse the gas and reduce ground level concentrations.

The residents of the town noticed the obvious improvement and wrote to the Department acknowledging this fact. A report in a local newspaper of a meeting of the Boolaroo-Speers Point Progress Association was "Smog Recorder gets Results".

Collection of Fly-ash from Boiler Plant

For some time complaints have been received of irregular but heavy fall-out of fly ash from boiler chimneys in the Balmain area. As an initial step in determining the source of this material, deposit gauge surveys were carried out and these showed that fall-out which was sometimes heavy was occurring. Because of the irregular nature of the occurrence it was found to be difficult to obtain conclusive evidence on which works was the source. However, by petri-dish surveys the source was finally established as a coal-fired boiler.

When the owners of the boiler were informed of the results of the investigations they agreed to install a dust collector on their boiler plant. Before this was done stack emission tests were carried out to determine the actual quantities and size of the fly-ash being emitted. The tests showed that during normal operation the emission was 0.17 grains/c. ft. and when soot blowing it was about seventy times higher. These tests, together with the comparison of various fall-out samples indicated that the irregular but severe emissions from this plant resulted from the soot blowing operation together with the re-entrainment of fly ash from the economiser hopper.

Size analysis of fly-ash samples showed that an efficient mechanical collector of the cyclone type would be required to collect a major proportion of the emitted material. The Company decided to install a dust collector of the recommended type.

Following the installation of the collector stack tests were again conducted and it was found that during normal operation the emission had been reduced to 0.027 grains/cu. ft. and the efficiency of the collector ranged from 82 to 83.2 per cent. A very significant reduction in emission had also occurred during the soot blowing and the collector trapped virtually all particles above 75 microns in size.

The satisfactory outcome resulting in the solution of the dust emission problem from this boiler of relatively small size (evaporation 15,000 pounds per hour) has given the Air Pollution Control Branch more confidence in approaching similar installations. Since the work was completed several other firms operating boiler plant have been asked to take similar action.

Soot Fall-Out from a Bakery

A resident of Harbord complained on 2nd September, 1963, that thick black smoke accompanied by heavy soot deposits were frequently emitted from a neighbourhood bakery, and that this had been going on for about a year in spite of complaints addressed to the firm. The soot was reported to blacken cars, paintwork, clothing and any other object left in the open, and residents near the bakery could only hang out washing safely at the week-end.

A field engineer of the Air Pollution Control Branch visited the resident on several occasions to observe the emissions and to confirm that the complaints were justified. He then visited the bakery and noted that the baker made haphazard adjustments to a hand operated burner and that there was no view of the chimney from inside the building. In fact it was necessary to walk 30 yards outside to check whether the stack was smoking. He was also told that an additional oven with automatically controlled burner equipment was due for installation soon.

He instructed the manager to have the existing oil burner serviced, obtain correct operating instructions and see that these were carried out. He also advised that the new oven should be commissioned as soon as possible and that a skylight should be put in the bakehouse roof. The field engineer then made several follow-up visits to ensure that the advice of the Branch was fully understood, and a confirmatory letter was sent to the bakery manager.

All the recommendations regarding the existing burner were carried out by the end of September and the new oven was installed about a week later. In addition, the bakery manager made the foreman, instead of the baker, responsible for all adjustments to oil burners.

As a result of these actions taken on the advice of the Branch, there has been no further soot nuisance from the bakery although both ovens have been in use daily.

The Electrolytic Refining and Smelting Co. Ltd., Port Kembla

As reported in previous Annual Reports sulphur dioxide emission from this works has been a major problem in the Port Kembla area and following a major survey by the Department, the Management of the Company was asked to take corrective action. However, as the result of the failure of ore supplies which the Company previously treated, its future for a time was uncertain and this was not changed until the Cobar deposits began to be worked. As a result of this development the Company's future again could be decided and plans were made for large scale smelting to begin in the early part of 1965.

During the past year protracted negotiations were carried out between the Department and the Company to decide upon the most effective means of controlling sulphur dioxide emission. The final decision was that the Company should take steps to treat as much as possible of the sulphur dioxide and use it for the manufacture of sulphuric acid and that the remainder which could not be treated would be dispersed to atmosphere through a stack of 650 feet in height. This is probably the tallest stack on any copper smelter in the world even though there are many larger works than the one at Port Kembla. However, the height was decided upon calculations of the probable ground level concentrations which might be produced. A level was determined which it could be anticipated would not cause any inconvenience to residents of the south coast and would not have any effects on vegetation.

In order that the matter could be fully secured the Company was further required to purchase and install sulphur dioxide recorders to monitor the ambient atmosphere and an undertaking was received from the Company that operations would be curtailed or stopped altogether if the weather conditions were such that concentrations higher than the recommended limit were recorded in any area. When the Company resumes smelting operations it is also the Department's intention to install recorders in the area to ensure that the interests of the community are protected.

Oil Refinery Flares

One of the major problems encountered by the Department during the year arose from the flares operated by some of Sydney's oil refineries. Many complaints were received, most of which related to the emission of black smoke at times when the refineries were burning more than usually large amounts of gas through their flares.

In one major example it was found that the practice of steam injection for the treatment of gases through flares was in accordance with world standards, but the problem was largely caused by disturbances in the catalytic cracking plant which had been commissioned later in 1962. At the instigation of the Department the Company tried, on a pilot scale, ideas put forward by the Department's engineers for the injection of air in addition to steam into flares. These methods proved satisfactory from the air pollution point of view but introduced new problems related to the increased production of noise. Consequently, these methods were not proceeded with but at the end of the year the Company was taking steps to increase steam supplies so that normal steam injection into flares could be improved. This work was proceeding at the end of the year but as there had been a major plant failure it was not expected that the catalytic cracking section of the works would commence operation until about March, 1964. Thus, the emissions were not in evidence.

This is a problem which has caused a greater number of complaints and it is one which the Department views with considerable concern but a complete solution has not yet been found. It is anticipated that there will be a reduction in the emission of smoke when the catalytic cracking plant begins to function correctly and when steam supplies have been increased. It is hoped that this will remove future cause for complaint but intermittent and possibly unavoidable discharges of black smoke may occur.

ATMOSPHERIC POLLUTION MEASUREMENTS

DEPOSIT GAUGES—SYDNEY AREA

Mean Deposit Gauge Results, 1963

(a) City of Sydney

Location of Gauge	Insoluble Solids Dust-fall	Combustible Matter	Ash	Soluble Matter
City, George Street North	9.5	3.2	6.3	5.8
City, Martin Place	19.7	5.5	14.2	6.7
City, Town Hall	14.0	4.8	9.2	6.3
City, Art Gallery	15.4	5.4	10.0	4.6
Potts Point	13.2	5.2	8.0	6.9
Paddington	10.3	4.1	6.2	5.8
Central Railway (Railway Square)	15.9	4.9	11.0	5.8
Pymont	37.9	10.0	27.9	9.3*
Ultimo	16.5	5.6	12.1	3.8
Redfern	12.0	3.1	8.9	6.4
Darlington	14.1	4.1	10.0	5.2
Rosebery	13.3	6.7	6.6	5.4
Botany East, Dudley Street	7.8	2.6	5.2	5.7
Botany, Banksia Street	8.9	3.4	5.5	5.7
Botany East, Denison Street	14.5	5.2	9.3	7.1
Botany, Stephen Street	13.0	5.1	7.9	6.2
Eastlakes, Casino Street	8.3	2.9	5.4	5.0
Mascot, Coward Street	10.3	3.1	7.2	5.1
Matraville, Baird Avenue	23.5	8.5	15.0	24.7
Matraville, Jersey Road	14.3	4.8	9.5	4.3
Matraville, Carnegie Circuit	18.1	4.8	13.3	6.0
Maroubra Junction, Cobham Avenue	12.0	5.4	6.6	6.5
Naremburn	9.4	3.4	6.0	4.3
Double Bay	5.2	2.0	3.3	4.3
Bankstown, Calidori Street	8.2	2.7	5.5	3.2
Bankstown, Market Street	6.8	2.2	4.6	3.0
Georges Hall	6.0	2.5	3.5	2.8
Padstow	7.5	2.4	5.1	2.6
Chester Hill	8.5	3.0	5.5	3.3
Greenacre	6.7	2.0	4.7	2.5
Panania	4.8	1.7	3.1	2.8
Sydenham	8.6	2.6	6.0	4.6
Gymea	8.1	3.2	4.9	2.8
Kirrawee	14.7	2.9	11.8	3.0
Auburn	9.7	3.7	6.0	3.1
Lidcombe	11.6	4.0	7.6	4.1
Silverwater	34.4	8.5	25.9	6.3
Burwood, Lucas Road	8.8	3.1	5.7	3.6
Burwood, Sherars Avenue	6.2	2.5	3.7	2.8
Enfield	6.7	2.3	4.4	3.3
West Ryde	9.0	3.5	5.5	4.3
Cabarita	13.6	7.3	6.3	5.4
Concord	6.7	2.6	4.1	3.0
Mortlake, 20 Turner Avenue	8.7	4.0	4.7	3.4
Punchbowl	8.0	2.5	5.5	2.8
Leichhardt	7.0	2.5	4.5	3.8
Annandale	11.2	4.5	6.7	5.3
Balmain	16.2	7.8	8.4	9.0
Rozelle, Callan Park	10.2	3.8	6.4	4.4
Rozelle, Quirk Street	12.8	4.2	8.6	4.3
Drummoyne	11.5	3.9	7.6	4.5
Fivedock	6.4	2.4	4.0	3.7
Cammeray	5.9	2.3	3.6	5.1
Crows Nest	6.9	2.5	4.4	4.8
Hornsby Heights	4.2	1.7	2.5	3.3
Gordon	4.5	1.8	2.7	3.0

* 8 months of year only

(b) City of Parramatta

Location of Gauge								Insoluble Solids Dust-fall	Combustible Matter	Ash	Soluble Matter
Northmead	..	..	..	..	..	..	..	6.8	2.9	3.9	3.1
Guildford	..	..	..	..	..	..	..	7.9	2.6	5.3	2.5

(c) City of Newcastle

Broadmeadow	..	..	..	..	..	..	..	13.3	5.2	8.1	12.6
Kotara	..	..	..	..	..	..	..	17.3	8.5	8.8	15.4
Mayfield West	..	..	..	..	..	..	..	20.9	6.4	14.5	15.4
Mayfield..	..	..	..	..	..	..	..	19.2	6.6	12.6	13.2
Mayfield East	..	..	..	..	..	..	..	66.2	17.2	49.0	21.8
Newcastle, City Hall	..	..	..	..	..	..	..	15.1	6.4	8.7	23.5
Tighes Hill	..	..	..	..	..	..	..	27.7	9.0	18.7	15.4
Stockton	..	..	..	..	..	..	..	20.6	7.3	13.3	15.4
Waratah	..	..	..	..	..	..	..	13.3	5.5	7.8	16.4
Jesmond	..	..	..	..	..	..	..	10.8	5.6	5.2	14.6
Carrington	..	..	..	..	..	..	..	10.5	6.1	4.4	12.4

(d) City of Wollongong

Wollongong	..	..	..	..	..	..	..	19.0	5.4	13.6	13.6
Port Kembla, Military Road	..	..	..	..	..	..	..	25.4	6.4	19.0	12.0
Port Kembla, Wentworth Street	..	..	..	..	..	..	..	18.8	5.0	13.8	9.9
Port Kembla, Jubilee Street	..	..	..	..	..	..	..	27.8	8.0	19.8	7.7
Port Kembla, Somme Street	..	..	..	..	..	..	..	13.6	3.4	10.2	13.7
Cringila, Monteith Street	..	..	..	..	..	..	..	46.6	18.0	28.6	5.6
Cringila, Sheffield Street	..	..	..	..	..	..	..	53.2	17.4	35.8	4.8
Warrawong, 217 Flagstaff Road	..	..	..	..	..	..	..	20.4	6.5	13.9	6.4
Warrawong, 149 Flagstaff Road	..	..	..	..	..	..	..	90.1	39.0	51.1	6.8
Lake Heights, Northcliffe Drive	..	..	..	..	..	..	..	32.2	11.1	21.1	4.7
Primbee, Korrongulla Crescent	..	..	..	..	..	..	..	15.2	4.4	9.8	5.7
Dapto, Yorkshire Road	..	..	..	..	..	..	..	15.0	3.4	11.6	3.5
Dapto, Princes Highway	..	..	..	..	..	..	..	18.7	6.5	12.2	6.2
Warrawong, Taurus Avenue	..	..	..	..	..	..	..	41.3	12.7	28.6	6.4

MONTHLY SMOKE DENSITIES
SYDNEY AND SUBURBS, 1963
(COH Units per 1,000 lin. ft.)

Site				Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Sydney Town Hall	..	..	Av.	2.2	2.0	0.9	1.7	1.9	1.9	1.8	1.6	1.0	0.7	0.7	0.3
	..	..	H.D.	6.4	9.3	2.4	3.2	4.9	3.8	3.2	3.9	2.8	1.7	1.8	1.2
Redfern Town Hall	..	..	Av.	1.4	1.0	0.8	1.3	1.8	2.2	2.1	1.8	1.3	1.0	1.0	0.7
	..	..	H.D.	2.3	2.0	2.0	1.8	4.2	2.8	3.4	2.8	2.4	2.2	1.7	1.5
North Sydney	..	..	Av.	0.7	0.7	0.6	1.0	1.2	1.1	0.8	1.1	0.7	0.7	0.6	0.6
	..	..	H.D.	1.4	1.3	1.3	1.6	3.8	2.1	1.7	2.2	1.6	1.4	1.2	1.3
Balmain	..	..	Av.	0.7	0.9	0.8	0.9	1.3	1.2	1.1	1.2	0.8	0.7	0.7	..
	..	..	H.D.	1.6	2.4	1.3	1.5	3.4	2.0	2.0	2.0	1.7	1.7	1.2	..
Matraville..	..	..	Av.	0.3	0.4	0.3	0.7	1.0	1.0	0.8	1.0	0.8	0.5	0.4	0.2
	..	..	H.D.	1.0	1.2	1.0	1.7	3.6	1.9	2.4	2.2	2.2	1.4	2.6	0.6
Paddington Town Hall	..	..	Av.	1.1	0.8	0.5	1.2	1.3	1.5	1.3	1.4	1.0	0.6	0.6	0.5
	..	..	H.D.	2.0	1.4	1.5	1.9	3.6	2.3	2.6	2.1	2.2	2.0	1.4	1.3
Botany Council Chambers, Mascot.	..	..	Av.	..	..	..	1.3	1.2	1.3	1.6	2.3	1.2	1.0	..	..
	..	..	H.D.	..	..	..	5.1	2.3	3.6	4.4	5.8	2.7	1.7	..	..
Botany Town Hall	..	..	Av.	..	..	..	..	0.9	0.7	1.2	1.4	0.9	0.7	..	..
	..	..	H.D.	..	..	..	..	2.1	2.2	2.9	2.5	2.2	2.5	..	..

NEWCASTLE															
City Hall, Newcastle	..	..	Av.	1.1	1.1	1.3	1.8	2.0	1.4	2.0	2.0	1.8	1.4	0.9	0.8
	..	..	H.D.	5.6	2.4	2.9	5.8	3.9	3.9	5.8	6.2	4.2	5.8	3.3	2.6
Bolton Street, Newcastle	..	..	Av.	0.7	0.5	0.6	1.0	2.0	1.9	1.6	1.4	1.3	0.5	0.6	0.2
	..	..	H.D.	3.2	1.3	2.6	4.4	4.4	5.2	3.2	3.3	3.3	1.9	1.4	0.6
Mayfield East, Newcastle	..	..	Av.	1.7	1.5	1.4	1.4	2.0	1.8	1.6	1.9	1.1	1.8	1.4	1.5
	..	..	H.D.	5.4	3.7	3.4	3.7	3.9	3.5	3.5	4.1	3.4	4.8	3.9	3.7

SULPHUR DIOXIDE CONCENTRATIONS

SYDNEY AND SUBURBS, 1963

(Parts per 100 million)

Site	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Sydney Town Hall Av. ..	0.5	1.7	0.5	1.8	0.9	1.3	1.4	1.8	1.9	1.3	1.5	2.7
H.D. ..	1.1	4.0	2.3	5.4	4.2	3.3	4.7	3.6	3.7	2.6	2.0	7.5
Redfern Town Hall Av. ..	2.9	2.8	2.3	2.9	2.2	2.6	3.0	2.8	2.6	2.4	2.3	3.5
H.D. ..	4.3	3.7	3.5	3.8	3.4	4.8	4.8	4.0	3.3	3.5	3.3	4.8
North Sydney Av. ..	0.9	0.9	0.9	1.1	1.4	1.3	1.8	1.3	1.1	1.1	1.0	1.1
H.D. ..	1.2	1.4	1.7	2.4	3.0	2.4	3.5	2.7	2.5	1.8	1.4	2.5
Matraville. Av. ..	1.3	2.0	1.5	1.5	1.6	1.3	2.0	2.2	2.0	1.9	2.2	1.7
H.D. ..	1.8	5.1	7.0	3.8	2.8	2.8	3.4	3.7	2.8	3.7	6.3	4.6
Paddington Town Hall Av. ..	7.3	6.9	5.2	4.3	3.6	2.8	3.4	3.8	4.6	6.0	6.7	10.2
H.D. ..	14.3	9.4	9.1	6.0	4.6	3.8	4.9	5.6	10.1	10.1	9.4	19.5
Botany Council Chambers, Av. ..	..	..	..	0.2	1.1	1.3	1.9	2.3	1.2	2.8	..	..
Mascot. H.D. ..	..	..	..	1.2	2.0	2.5	6.2	5.7	1.9	9.3	..	..
Botany Town Hall Av. ..	..	..	..	..	0.9	0.6	0.9	1.3	1.5	1.0	..	..
H.D. ..	..	..	..	..	1.3	1.2	1.5	2.1	2.5	2.0	..	..

NEWCASTLE

City Hall, Newcastle Av. ..	0.0	0.2	0.6	1.8	1.0	0.5	0.8	1.0	0.6	1.4	0.1	0.0
H.D. ..	0.0	1.6	4.4	6.3	2.5	2.8	2.8	4.1	1.6	2.2	1.9	0.0
Bolton Street, Newcastle .. Av. ..	0.2	0.3	1.7	1.6	1.7	1.1	1.6	1.1	1.5	0.9	0.3	0.1
H.D. ..	0.9	0.7	2.2	3.7	3.3	3.1	3.7	2.3	3.3	2.2	1.3	0.3
Mayfield East, Newcastle .. Av. ..	0.7	0.8	1.1	2.0	1.8	0.5	1.7	1.3	1.6	1.3	1.0	0.5
H.D. ..	3.6	2.8	3.0	3.6	3.6	2.3	2.9	4.0	5.7	3.0	1.8	1.6

School Medical Service—Annual Report, 1963

STAFF

Establishment:

Director: N. S. SOLOMONS, M.B., Ch.M.

Deputy Director: W. S. HEMPHILL, M.B., B.S., D.C.H.

Senior Psychiatrist; 6 Psychiatrists; 4 Trainee Psychiatrists; 2 part-time Psychiatrists; 8 part-time Ear, Nose and Throat Specialists; 1 part-time Ophthalmologist; 4 Senior Medical Officers; 7 Teachers' College Medical Officers; 3 part-time Teachers' College Medical Officers; 34 School Medical Officers; 1 part-time Medical Officer; 1 Senior Psychologist; 16 Psychologists; 2 Trainee Psychologists; 15 Social Workers; 4 Trainee Social Workers; 1 Senior Speech Therapist; 16 Speech Therapists; 18 Trainee Speech Therapists; 67 Nurses; 18 Clerical Officers; 1 Switchboard Operator.

New positions created during the year (included in above):—

1 full-time Teachers' College Medical Officer to replace 1 part-time Medical Officer; 6 Nurses.

As at the end of 1963, vacancies existed for—

3 Medical Officers; 2 Trainee Psychiatrists; 1 Teachers' College Medical Officer; 1 part-time Teachers' College Medical Officer; 4 Psychologists; 5 Nurses; 1 Clerical Officer.

As a result of a clerical work survey, one post of Incremental Clerk and 2 posts of Office Assistant were deleted from the standard establishment, and 5 posts of Office Assistant were transferred to the new Medical Examination Centre.

The establishment of medical officers and nurses was not increased during the year, and again the effective strength of the staff throughout the year was below the authorised establishment; for example, the equivalent of three medical officer years were lost through leave without pay and sick leave, and the equivalent of two medical officer years were lost through the lag in filling vacancies. The procedure in schools was not varied from last year. However, a very much reduced number of children were medically examined; for instance, 233 schools in the County of Cumberland alone were not visited. On the other hand, this reduction in numbers is somewhat offset by the large increase in the number of parent interviews carried out by medical officers in schools, each of which would be equivalent to the medical examination of approximately four children, and the increase in the number of atypical children given special examinations in both Head Office and the Child Health Centres.

The scheme for the medical examination of country school children by local medical practitioners and nurses again expanded and at the end of the year there were 100 Local Government areas taking part (90 in 1962).

The medical examination of special cases referred by school medical officers, parents, medical practitioners, teachers, the Division of Guidance and Adjustment and other agencies to the special clinic at Head Office and the various Child Health Centres continued to increase during the year. The cases referred included all types of atypical children—physical, mental social and educational—and in all cases reports were given to the referring agency, and in addition, to the family doctor with the parent's consent.

As a result of reorganisation within the Department, tuberculin skin testing was transferred from the Division of Tuberculosis to the School Medical Service in August, and all the nurses attached to the Epidemiology Section of the Division of Tuberculosis were transferred to the School Medical Service, although the establishment of nurses of the School Medical Service was only increased by two. It was decided that in future in schools only second year high school pupils would be tuberculin tested, although it is anticipated that this will need to be extended to include fourth year high school pupils early in 1964.

The Child Health Centre at Chatswood was completed right at the end of the year and it is anticipated that it will commence to function at the beginning of the second week in January, 1964. Plans have been accepted and a contract signed for the erection of a Child Health Centre at Yagoona, and tenders have been called for the erection of a further Centre at Ryde.

The In-Service Training Course in Mental Health was repeated during the year and was attended by nine medical officers from the Department and eight other practitioners.

The Course in Public Health Nursing was also repeated and completed by 18 nurses, 16 of them from the Department and two from the Anti-Tuberculosis Association.

The service to preschool children was continued during 1963, but unfortunately no expansion was possible in this field.

The medical examination of applicants for Teachers' College Scholarships was carried out as anticipated in last year's Annual Report. The Medical Examination Centre commenced to function as a separate branch in May and took over all the medical examinations of teachers and trainee teachers.

Again senior officers of the Division took part in conferences with and addresses to local medical associations and groups of specialist practitioners. Other facets of Health Education were also carried out, for example, talks on television and radio, press articles, and lectures and talks to groups of teachers, inspectors, counsellors and parents.

MEDICAL INSPECTION OF SCHOOL CHILDREN

During 1963, a much smaller number of school children were medically examined and a large number of schools in the metropolitan area, Newcastle and Wollongong were not visited. The actual procedure was unchanged, but the new medical history card, as recommended by the Organisation and Methods Clerical Survey Team, was brought into full usage, with a new method of annotation of defects.

Several conferences were held during the year by senior officers of the Division and it was decided that the procedure would be again varied, commencing at the beginning of 1964, by eliminating the full examination of second year high school pupils and substituting a review examination. To carry this out a new questionnaire to be filled in by parents of high school pupils has been evolved.

During the year, medical officers examined 221,503 children, of whom 145,173 were fully examined and 76,330 were reviewed; 33,605 of the latter group being in fourth grade and fourth year (Table 1).

TABLE 1

	1961	1962	1963
School population	809,493	830,483	837,589
Number of pupils fully examined and reviewed	260,217	276,385	221,503
Number of pupils fully examined	158,476	162,898	145,173
Number of pupils reviewed in 4th grade and 4th year	35,471	39,963	33,605
Other reviews	66,270	73,524	42,725
Number of pupils fully examined and number reviewed in 4th grade and 4th year, expressed as percentage of school children	23.96	24.43	21.34

Table 2 shows in detail the number of children who were fully examined or whose cases were reviewed in primary and secondary schools for the years 1961, 1962 and 1963, in the metropolitan area, country, and the whole of the State.

Table 3 shows the number of pupils who were fully examined or reviewed and the school population in the metropolitan area, remainder of the State, and in New South Wales, for the year 1963.

Excluding dental defects, the number of defects of notifiable standard found in children fully examined was 65,495, and it was found necessary to notify 52.4 per cent of these to parents or guardians, in order that further investigation and/or treatment could be instituted. The most important defects are shown in Table 4.

The number of parent interviews carried out by medical officers in 1963 was 21,460, as compared with 15,368 in 1962. The percentage of parents interviewed to the number of children fully examined during 1963 was 15.48, compared to 9.43 in 1962.

The number of "warning letters" sent to parents of children in fourth and fifth years in the metropolitan area, including the Child Health Centres, was 1,174, compared to 912 in 1962. These letters indicate to parents defects which might debar the acceptance of their child as a trainee teacher, at the same time informing parents that the Service would be prepared to give a definite opinion on the suitability of the child for such training, if desired. Many parents availed themselves of this opportunity, and 306 children were examined—209 at Head Office, 25 at the Child Health Centre, Forest Lodge, 39 at the Child Health Centre, Parramatta, and 33 at the Child Health Centre, Bexley. In addition, definite opinions were given to 363 parents regarding vision and hearing defects without examination, on the presentation of the requisite certificate of oculist or aurist.

During the year, medical officers of the Service examined 2,463 boys admitted to the Child Welfare Shelters at Albion Street and Yasmar, Haberfield.

In 1963, visits were paid to nursery schools by medical officers of this Service, the details of which are given in a later section of this Report. Similarly, the medical examination of children at special schools is dealt with separately.

Special Follow-up Visits to Schools by Medical Officers

Special follow-up visits to schools were continued during the year. This scheme was initiated for the purpose of acquainting teachers of the medical problems which may be affecting a child's learning ability, or his behaviour in the school situation, and to offer advice on the child's management.

Interviews were held concerning 19 boys and 6 girls whose cases had been referred by paediatricians, general practitioners, hospital clinics, child guidance clinics, and also from the school medical officers who regularly see atypical children. Review visits will be made in respect to these children, to evaluate their subsequent progress.

In general, the children involved are those suffering from the effects of epilepsy, organic brain damage, speech defects and emotional problems.

The progress of a further 44 boys and 23 girls was reviewed in a second interview with their teachers, and results were found to be most satisfactory in all but a few cases. The latter will be reviewed again later but no further follow-up appears indicated for the other group now that the teaching staffs are aware of their problems.

In almost all cases, teachers have been most co-operative and most appreciative of any directions in guiding them in their management of these children, and have spent much time and patience in this work.

Parents, in reporting back to clinics, have indicated that improvement has been noted as a result of a greater understanding of, and interest in their children's problems.

Evaluation of results seems to indicate that there is a real place for such a service and that it is operating successfully in its present form.

Child Health Centre, Bexley

Dr. R. ELLAM, M.B., Ch.B.

This Centre was officially opened on 17th May, 1963, by the Hon. W. F. Sheahan, Q.C., LL.B., M.L.A., Minister for Health.

At the beginning of 1963, increased accommodation was provided at the Centre with the completion of the remodelling work. With this extension of the premises, facilities became available for two speech therapists, and for a hearing clinic. The Child Guidance Clinic was also expanded with additional accommodation for a second psychologist and for group therapy work.

The number of schools covered by the Centre has been reduced to 72 as a result of regrouping of certain schools in the area. This has not affected the total school population which remains at approximately 43,000.

During 1963, the medical officers examined 14,316 children in the schools. Full medical examinations were carried out on 10,396 children. In addition, it was considered necessary to review 3,920 of those children who had presented defects at previous medical inspections.

Defects of a notifiable standard, excluding speech defects, were found in 14.56 per cent of the children examined.

Whenever possible, interviews with parents were arranged at the school by the medical officers in all instances where defects of a notifiable standard were discovered or when the presence of significant problems were raised by parents or teaching staff. The number of parent interviews at the schools in 1963 totalled 1,312.

Letters were sent to parents of 4th and 5th year high school pupils whenever a pupil, who had expressed the intention of applying for a Teachers' Training College Scholarship, was found to have a defect which might debar their acceptance. The parents were warned of the existence of the condition and were informed that the Service would be prepared to give a definite opinion on the suitability of the pupils for the teaching service, if desired. The number of warning letters sent out in 1963 was 99. A total of 69 parents availed themselves of the service offered, and 33 children were subsequently examined at the Centre, whilst definite opinions were given to a further 36 parents in regard to vision and hearing defects after presentation of the requisite oculists' or aurists' certificates.

To effect a scheme of follow-up of notified defects, the nurses of the Centre made visits to the schools and the homes. A total of 116 visits were made to the schools, where 1,271 children were interviewed, in addition to 787 home visits.

A survey was made to determine the parental response to the notification of defects and the effectiveness of the follow-up system. A total of 1,214 children with notifiable defects from 54 schools were assessed. It was found that in 80 per cent of the children the parents had initiated appropriate action within a reasonable period of time. In 13 per cent of the cases no action had been taken by parents after several months. In the remaining 7 per cent of the children the defects appeared to have resolved spontaneously without medical attention.

All sections combined as a team to deal with the medical and emotional needs of the children referred to the Centre. New cases accepted for treatment in both the Speech Therapy and Child Guidance Clinics were given an initial medical assessment. This practice seemed well justified when judged by the number of previously unrecognised defects which were revealed. The four medical officers conducted 1,160 consultations at the Centre in 1963. This total includes 720 new cases referred for investigations together with the 440 review appointments which were arranged. The referring agencies of the new cases were as follows:—

Referring Agencies									Number of New Cases
Centre Staff	..	..	..	..	..	..	..	..	361
Teaching Staff	..	..	..	..	..	..	..	..	81
Parents	..	..	..	..	..	..	..	..	187
Medical Practitioners	..	..	..	..	..	..	..	..	41
Division of Guidance and Adjustment				..	..	..	..	..	37
Baby Health Centres	..	..	..	..	..	..	..	..	1
Child Welfare Department	..	..	..	..	..	..	..	..	6
Vocational Guidance Bureau	..	..	..	..	..	..	..	..	3
Catholic Family Welfare Bureau	..	..	..	..	..	..	..	..	2
Other	..	..	..	..	..	..	..	..	1
									720

A detailed analysis of reasons for referral of all new cases is given hereunder:—

	Percentage of total referrals	No. Pre- school children		No. Infant school children		No. Primary school children		No. High school children	
		B.	G.	B.	G.	B.	G.	B.	G.
Physical defects	13.5	6	5	24	14	13	17	9	9
Emotional problems	49.5	4	2	73	34	78	48	81	36
Mental retardation	7.4	7	3	13	14	8	8	..	..
Specific learning disabilities	1.4	..	..	4	..	5	1	..	..
Speech defects	21.4	15	4	62	30	27	8	8	2
Suitability for teacher training	4.6	..	..	..	..	..	..	10	23
Doubtful, including nocturnal enuresis	2.2	..	..	4	1	4	..	6	..

Mental health problems have again accounted for the majority of the new referrals. The Child Guidance Clinic staff have given advice and help in dealing with these cases and have continued the weekly case conferences initiated in 1962. The case conferences have also afforded an opportunity to establish a more intimate association between the Centre staff and others working with school children. A total of 107 cases were transferred to the Child Guidance Clinic by the medical officers.

The two speech therapists working at the nearby Rockdale Speech Therapy Clinic were transferred to join the staff of the Centre in January, 1963. This has resulted in a much closer liaison between the Speech Therapy Clinic and the rest of the Centre staff.

The Hearing Clinic commenced working one day per week in March, 1963, and this has been adequate in dealing with the number of referrals. A total of 482 cases were seen and of these, 283 were new, whilst 199 were review appointments. Children found to be suffering from treatable deafness were usually referred to the family physician or to the appropriate department of a general hospital. Where supply of a hearing aid seemed advisable, cases were referred to the Commonwealth Acoustic Laboratory. Other information concerning the work of the clinic is given hereunder:—

	Total Number	Hearing Normal	Deafness due to Remediable Defects	Severe Chronic Deafness	Treatment Recommended or Receiving Treatment	Hearing Aid Recommended
New Cases—						
B	166	93	41	6	29	..
G	117	63	52	3	42	..
Total ..	283	156	93	9	71	..
Reviews—						
B	118	67	26	8	19	1
G	81	37	25	7	18	1
Total ..	199	104	51	15	37	2
Grand total ..	482	260	144	24	108	2

A close liaison has been established and maintained with other Government Departments and with various institutions and individuals, such as the Department of Child Welfare, Department of Education officers, including school counsellors, the local hospitals and local general practitioners.

Child Health Centre, Forest Lodge

Dr. G. J. COUSINS, M.B., Ch.M., D.C.H.

During 1963, this Centre has continued the pattern of previous years. Medical inspections were completed in all but one of the 108 schools of the area. Full examinations were carried out on 10,672 children and review examinations on 7,891, the number of parents interviewed by medical officers being 2,120.

The sisters of the Centre, in following up notified defects, interviewed a total of 2,305 children in the schools and visited their homes on 1,318 occasions. The nurses referred 102 children to the Centre for further investigation.

A survey of the nurses' follow-up work indicated that, of 2,344 defects in children notified, parents had commenced appropriate attention for the defect in 57.1 per cent of the cases within three months. After several months 19.1 per cent of the defects remained untreated, and in 6.1 per cent of the cases the defect had resolved without medical attention.

Consultations with medical officers at the Centre, for both parent and child, have been held on 685 occasions during 1963. Four hundred and nineteen new cases were assessed and 266 reviewed consultations were held. These figures are much below those of 1962 and are attributed to a considerable loss of medical officer time with sick leave. Of the 419 new cases, some 69 per cent (i.e., 290 cases) were mental health problems. Physical defects were significant in 72 cases (17.4 per cent) and in 57 cases (13.6 per cent) there were symptoms of mixed or doubtful origin.

Departmental schools provided 76 per cent of the 419 new cases, private schools 18.1 per cent, and pre-school children numbered 24, or 5.7 per cent.

Letters were sent to the parents of 78 senior high school students who were known to have physical defects which could debar them from teachers' college training, offering to arrange for medical assessment of the students as to their suitability for entrance to a teachers' college. As a result, 25 students and their parents attended and were advised appropriately. In addition, 25 oculists' and aurists' certificates were assessed and letters forwarded to parents in regard to the students' medical suitability for the teaching profession.

Medical Officers of the Centre visited the seven nursery schools of the area on 27 occasions, examined 435 children and interviewed 143 parents in regard to health and management matters.

Children with speech defects are assessed by the speech therapists in consultation with the paediatricians. Whenever necessary, the other resources of the Centre are used in the evaluation of these children.

The Hearing Clinic has handled approximately 20 per cent more cases as compared with 1962, and extra sessions have been arranged to reduce the waiting list. Information regarding the work of the clinic is as follows:—

	Total Number	Hearing Normal	Deafness due to Remediable Defects	Severe Chronic Deafness	Treatment Recommended or Receiving Treatment	Hearing Aid Recommended
New Cases—						
B	169	49	96	11	59	..
G	136	36	90	7	56	..
Total ..	305	85	186	18	115	..
Reviews—						
B	182	58	76	22	24	1
G	123	41	62	14	24	1
Total ..	305	99	138	36	48	2
Grand total ..	610	184	324	54	163	2

The work of the Dietitian from the Department of Public Health has continued and during 1963, 12 new cases were taken on for treatment, in addition to 60 review interviews. It was noted that 37 patients failed to keep appointments in this difficult field.

The child guidance team working within the Centre accepted for further investigation 177 cases from medical officers of the Centre. These children, and those attending the Bridge Road Public School for emotionally disturbed children, have regular supervision of their health, development and progress.

Pre-school children were examined in three Maternal and Baby Welfare Clinics during the year; a total of 89 half-day sessions were attended. Whilst the service is aimed at encouraging attendance of well children, in addition to those with suspected illhealth, the latter group predominated and the morbidity rates are very high. Of 329 new children seen, 259 (or 78 per cent) were assessed as having significant morbidity. Statistical information is as follows:—

	Glebe	Newtown	Dulwich Hill	Total for all Clinics
New cases seen	40	98	191	329
Review cases	13	60	41	114
Total cases seen	53	158	232	443
No. of Sessions	12	37	40	89
No. of cases which failed to attend ..	26	28	46	100
Morbidity—				
New cases only.. { Physical	14(35%)	28(28.4%)	98(51.2%)	140(42.5%)
Mental Health	5(12.5%)	44(44.9%)	70(36.6%)	119(36.1%)
Total	19(47.5%)	72(73.4%)	168(87.9%)	259(78.6%)

As in previous years, the Centre’s lecture room has been used for teaching purposes, such as the In-Service Training programmes for Public Health Nurses, In-Service Training in Mental Health for medical officers, and for meetings with parent groups and Department of Education officers.

Liaison and co-operation has been continued, with reciprocation of information and reports, with officers of the Departments of Education and Child Welfare, with the Royal Alexandra Hospital for Children and the Royal Prince Alfred Hospital, and with general practitioners.

Child Health Centre, Parramatta

Dr. P. M. O’FLYNN, M.B., B.S., D.P.H.

The work of this Centre proceeded very satisfactorily during 1963. In late May and early June, 4 psychiatrists from Parramatta Hospital started to attend on a half-day per week basis each in an effort to cope with the long waiting list for psychiatric appointments. In August, Dr. Boger, Assistant Medical Officer, commenced to attend one day per week to assist with intake interviews. However, owing to other commitments, his attendance is now curtailed to infrequent attendances to follow up at review cases previously seen by him.

During 1963, two medical officers attended pre-school clinics at Granville and Auburn Baby Health Centres on a half-day per week basis each; 313 new cases and 39 review cases were seen. The incidence of physical, emotional and speech problems among children of this age group in the clinics makes it a worthwhile and interesting service.

During school medical inspections the medical officers fully examined 11,136 children, reviewed 4,195 others, and interviewed 3,607 parents.

School sisters made 1,484 home visits in 1963 (mostly at the request of the medical officers) and followed up 651 children with notifiable defects; of these, 78.5 per cent had been treated within three months of notification. This figure reflects the very good parent co-operation which has always been apparent in this area.

During the year, 39 fourth and fifth form students were medically examined at the Centre in order to determine their medical suitability for entrance to a Teachers' College, and in addition, 22 certificates from oculists and aurists were assessed for the same purpose.

At the request of several ophthalmic surgeons, vision testing was attempted on 45 pre-school aged children and reports forwarded.

During the year, 1,354 children with parents were seen at the Centre by medical officers. Of these, 741 were new cases, an increase of 103 compared with 1962. An analysis of the 741 new cases showed that 465 were boys and 276 were girls; 550 attended Departmental schools, 120 attended private schools and 71 were pre-school children. Referring agencies were as follows:—

Specialists, general practitioners, hospitals	..	..	..	..	178 cases
Parent applications	..	..	..	..	156 cases
Headmasters and Infants' Mistresses	..	..	..	..	135 cases
School medical officers	..	..	..	..	118 cases
Department of Education	..	..	..	..	86 cases
School counsellors	..	..	..	..	26 cases
Social agencies	..	..	..	..	18 cases
Child Welfare Department	..	..	..	..	13 cases
Baby Health Centre Sisters	..	..	..	..	11 cases
					<hr/> 741 <hr/>

Disposal of new cases was as follows:—

Referred for review by medical officer	..	..	..	..	399 cases
Referred to Child Guidance Clinic	..	..	..	..	199 cases
One interview only	..	..	..	..	137 cases
Referred to own doctor for treatment	..	..	..	..	6 cases
					<hr/> 741 cases <hr/>

In the cases of the 137 children where one interview only was undertaken at the Centre by the medical officers, referral to speech therapists or the Department of Education for further necessary action was effected in many cases. Of the 399 cases referred for review, a percentage would later be channelled to the Child Guidance Clinic following investigations such as electroencephalograms or psychological testing.

During 1963, 613 cases were seen at review appointment, compared with 286 seen during 1962. This larger figure for the current year reflects the increased confidence of medical officers to undertake counselling procedures.

The Child Guidance Clinic continued to function as in the past, and dealt with a total of 579 cases.

During 1963, 430 new cases (258 boys and 172 girls) and 466 reviews (258 boys and 208 girls) were examined at the Hearing Clinic, making a total of 896 children seen at the Clinic. Details are as follows:—

	Boys	Girls	Total
New cases with normal hearing	61	39	100
Review cases with normal hearing	102	63	165
New cases recommended or under treatment	34	14	48
Review cases recommended or under treatment	26	17	43
New cases remedial E.N.T.	89	85	174
Review cases remedial E.N.T.	64	55	119
New cases recommended O.D. class	1	3	4
Review cases recommended O.D. class	..	1	1
Chronic Deafness	145	82	227
Hearing aid recommended and referred to Commonwealth Acoustic Laboratory	1	1	2
Wearing hearing aid	4	9	13
			<hr/> 896 <hr/>

The Speech Therapy Clinics continued to function throughout the year with a staff of two therapists.

Figures relating to the work of the Child Guidance Clinic and the Speech Therapy Clinics are included in Tables 5, 6 and 6A.

Weekly conferences of medical officers, Child Guidance Clinic staff, speech therapists and members of the Parramatta Educational Clinic of the Department of Education were held. These conferences were considered to be of immense value to all concerned, and particularly helpful in solving the problems of the children.

The co-operation and help of local medical practitioners and the staff of the Parramatta Educational Clinic throughout the year has been greatly appreciated, and has considerably helped all members of the Centre staff in carrying out the objects of the Child Health Centre.

Child Health Centre, Newcastle

The report on this Centre is incorporated in the Annual Report of the Medical Officer of Health, Newcastle Area.

Scheme for Medical Examination of School Children Conducted by Local Medical Practitioners for Shire and Municipal Councils

This scheme continued to function satisfactorily during 1963. By the end of the year the scheme had been established in 100 country Council areas and was under consideration in 13 other areas. In 21 areas the Local Government Authority had deferred or declined to initiate the scheme.

During the year, the children in 603 schools were examined (722 in 1962), 43,678 being the number fully examined (51,461 in 1962); 14,990 were reviewed (8,340 in 1962); and 1,845 parents were interviewed (2,107 in 1962).

Doctors conducting school medical examinations and nurses assisting them are paid by Councils according to a fixed scale of fees, and these payments are refunded to the Councils by the Department of Public Health.

Medical Examinations in Special Schools

During 1963, Departmental schools and schools and homes conducted by voluntary organisations and church organisations for the education of children with physical and/or intellectual handicaps were visited. Because of an increase in the number of schools visited, and an increase in the number of children attending certain schools, the previous method of examination was slightly altered. A full medical examination was carried out on every child who had enrolled during the year or who had not been previously examined. Review examinations were confined primarily to children referred because of specific problems, by the teacher or the parent. In the time remaining review examinations were carried out routinely on those children who had not been examined for two years.

Of the 1,110 children examined, 14.8 per cent were suffering from notifiable defects. These children were referred for investigation, and treatment where necessary, to local practitioners, hospital clinics or special clinics, e.g., speech therapy, child guidance, and the Commonwealth Acoustic Laboratory.

The Senior Speech Therapist gave considerable help by personal visits in the company of the school medical officer and by arranging for parent counselling in the Speech Therapy Clinics.

Information was interchanged between this Service and the Division of Guidance and Adjustment, Department of Education, with whom a most cordial liaison was maintained.

An assessment committee, consisting of a representative of the School Medical Service and representatives of the Department of Education, met during the year on several occasions to discuss the individual medical and educational problems of children in certain schools, viz., Farrar School for the Deaf; North Rocks School for the Blind; North Rocks School for the Deaf; the five special units for partially-seeing children; and Windgap, Coogee.

This year three additional special schools applied for the school medical service.

The following schools conducted by the Department of Education were visited: Glenfield Park Public School, Glenfield; Hassall Street Public School, Parramatta; Albert Road Public School, Strathfield; Cromehurst, Lindfield; Loftus Street, Arncliffe; Woniora Road Public School, Hurstville; School for the Blind, North Rocks; School for the Deaf, North Rocks; special units for partially-seeing children at Asquith Public School, Lidcombe Public School, Tempe Public School, Northmead High School and Kingsgrove North High School.

The following schools conducted by voluntary organisations were visited: Crowle Home, Ryde; Eurella House, Burwood; Sunnyfield Centre, Manly Vale; Southhaven, Kogarah; Sydenham-Bankstown Branch of the Subnormal Children's Welfare Association, Campsie; Sutherland Shire Handicapped Children's Centre, Sutherland; Windgap, Coogee; Greenacres School, Wollongong; Thorndale School, Penrith; Coinda Centre, Canley Vale; Sunnyhurst, Penshurst; and Dunrossil, Merrylands.

The home conducted by a voluntary organisation visited was, Isabella Lazarus Home for Jewish Children, Hunter's Hill.

The schools conducted by church organisations visited were: Mater Dei Special School, Narrellan; St. Edmund's School for Blind Boys, Wahroonga; and St. Lucy's School for the Blind, Wahroonga.

The homes conducted by the Department of Child Welfare visited were: Brush Farm, Eastwood; and May Villa, Dundas.

Information concerning the activities of this Service in special schools and homes during the year 1963 is given hereunder:—

School	No. of Visits	No. of Full exams	No. of Review exams	No. of Notifiable Defects	No. of Parent Interviews
Glenfield Park P.S., Glenfield	8	..	292	13	..
Hassall Street P.S., Parramatta	8	45	38	9	6
Woniara Road P.S., Hurstville	3	18	27	7	2
Albert Road P.S., Strathfield	2	1	21	3	..
Cromehurst, Lindfield	1	2	6	2	..
Loftus Street P.S., Arncliffe	2	..	18	1	1
Brush Farm, Eastwood	2	18	10	4	..
May Villa, Dundas	2	3	14	4	..
Crowle Home	6	17	35	13	13
Eurella House	3	10	15	11	12
Sunnyfield Centre	1	5	8	8	..
Southaven	2	7	10	3	7
Sydenham-Bankstown Branch, Subnormal Children's Welfare Assn.	5	9	30	6	12
Sutherland Handicapped Children's Centre	4	16	14	8	17
Windgap	6	12	40	11	28
Greenacres	3	8	25	7	5
Cooinda	2	10	3	1	3
Thorndale	3	16	6	6	18
Dunrossil	5	27	25	9	14
Sunnyhurst	5	27	..	5	27
Isabella Lazarus Home for Jewish Children	1	2	..	1	1
Mater Dei Special School	2	19	2	2	..
St. Edmund's School for Blind Boys	2	30	..	3	..
St. Lucy's School for the Blind	2	31	..	3	..
School for the Deaf, North Rocks	4	30	23	15	..
School for the Blind, North Rocks	2	2	15	2	..
Units for partially seeing children at—					
(1) Tempe P.S.	2	5	32	4	2
(2) Lidcombe P.S.	1	1	12	1	1
(3) Asquith P.S.	1	..	5	..	..
(4) Kingsgrove North H.S.	2	..	7	1	..
(5) Northmead H.S.	1	5	1	1	..
Total	93	376	734	164	169

Total number of medical examinations—1,110.

Percentage of notifiable defects—14.8 (approx.).

Nursery Schools

During 1963, the children in 15 nursery schools in the metropolitan area were examined. Children examined in nursery schools in country Health Districts will be reported on by the Medical Officer of Health of the District in his Annual Report. In the Metropolitan area a total of 61 visits were made to the schools, during which 1,061 medical examinations were carried out on 625 children, and 470 parents were interviewed.

Defects of notifiable standard found were as follows:—

Defects	Boys 324 Examined		Girls 301 Examined	
	No.	Percentage	No.	Percentage
Vision	4	1.23	..	..
Squint	14	4.32	8	2.66
Hearing	8	2.46	5	1.66
Nose and throat	30	9.26	20	6.64
Skin	19	5.86	16	5.32
Heart	7	2.16	4	1.33
Lungs	21	6.48	16	5.32
Asthma	10	3.09	9	2.99
Developmental—hernia	20	6.17	9	2.99
Orthopaedic	107	33.02	72	23.92
Nervous system	2	0.61	4	1.33
Maladjustment and behaviour problems	63	19.48	43	14.29

SCHOOL SANITATION

School sanitation in country areas has been decentralised to the Medical Officers of Health in their areas, and the statistics for each of these areas should appear in their individual Annual Reports.

The number of Departmental schools visited by medical officers in the metropolitan area and the small amount of the country directly administered from Head Office amounted to 557. There were no reports of unsatisfactory accommodation for pupils in these schools. Sanitation was found to be satisfactory in 96.77 per cent; buildings and grounds were satisfactory in 98.92 per cent; and accommodation for medical officers was considered satisfactory in 98.56 per cent.

On receipt of the reports from medical officers, the Department of Education is notified of the conditions found, and requested to take steps to remedy any unsatisfactory findings.

CHILD GUIDANCE CLINICS

During 1963, the Child Guidance Clinics functioned with a full establishment of psychiatrists, psychologists and social workers for the major part of the year. The staff of psychiatrists, psychologists and social workers underwent changes of personnel, but mostly a full staff was available for work in Brisbane Street (three teams), Yasmar (one team), Forest Lodge (one team), Bexley (one team), Parramatta (one team), Camperdown (one team) and Newcastle (one team). A welcome innovation was the secondment of psychiatrists from the Division of State Psychiatric Services to work on a sessional basis at the Child Health Centre, Parramatta. Four half-day sessions per week were gained in this way from May, 1963, and contributed considerable help in overtaking the waiting list for child guidance services at that Centre.

A full guidance team of psychiatrist, psychologist and social worker was placed at the Child Health Centre, Bexley, in mid-1963—this move was another step in the decentralisation of child guidance activities from the Brisbane Street Centre to Child Welfare Centres in the metropolitan area.

The In-Service Training Course in Mental Health in Childhood was again conducted during the year. Provision was again made, by arrangement with the Postgraduate Committee in Medicine, for general practitioners to attend, and a total of 14, including those from the School Medical Service, attended a series of 12 sessions conducted by the Senior Psychiatrist, the Senior Psychologist, and a Social Worker. The course consisted of lectures, case discussions and seminars.

The majority of referrals to Child Guidance Clinics continue to be made by parent application. The next greatest source of referral is by the staff (medical officers, nurses, speech therapists) of the School Medical Service. The Children's Courts, Department of Education, social agencies and hospitals, and the Department of Child Welfare provide approximately one quarter of the referrals.

As in previous years, the demand for child guidance services exceeded the supply of specialised personnel and the policy of utilising the psychiatrist as a consultant, as opposed to a therapist, to medical officers, psychologists and social workers continued to be expedient. This policy is more workable and offers a greater chance of success in the Child Health Centres because of the more intimate working relationships in such systems.

During 1963, there were 3,695 new referrals (4,485 in 1962). This decrease in the number referred for full psychiatric assessment could have been influenced by the policy of school medical officers being involved with the management of children with emotional problems in consultation with the psychiatrist in the Child Health Centre, and thus reducing the number of children who are formally referred to a guidance clinic.

A statistical summary of the work of the Child Guidance Clinics is given in Table 5.

Bridge Road School

The year 1963 was the first full year of operation for the Bridge Road School. There was a continuation of the difficulty in selecting suitable children for educational and psychotherapy by the school and child guidance teams. The accepted standards for suitability were, broadly, normal intellectual potential, an emotional disorder which should respond to the dual therapies in a relatively short time (e.g., within the academic year), and a chance of modifying the various aetiological factors towards a good outcome for the child and his family.

Of approximately 100 children referred for evaluation as to suitability for admission to the special school, 12 children were considered to be suitable and were accepted at the school for varying periods during the year. Multiple observations on these children by the teachers, physician, psychiatrist, psychologist and social worker indicated that most of them showed some improvement in one or all areas of education, mental health, intellectual potential. Two children exhibited a marked improvement in behaviour and scholastic ability and were able to resume attendance at their original school after six months of special schooling and psychotherapy—both children showed an increase of at least ten points in I.Q. measurement during the period.

It is felt that the school-clinic combination has overcome many of the initial problems which can be expected in the early stages of such a project and that 1964 will give a chance for a realistic evaluation of the results of a combined effort between education and health to deal with some emotionally disturbed children.

SPEECH THERAPY

In January, 1963, there were 12 full-time and two part-time Clinics and one special Clinic operating.

Services have been extended; two therapists are now at Newcastle, and two at each of the Child Health Centres—Bexley, Forest Lodge and Parramatta.

Six trainees commenced Departmental traineeship, and one therapist completed her traineeship, entering the Service at the end of the year.

During 1963, 1,759 cases were treated, as compared with 1,115 the previous year. Again, the results of existing policy to make clinical contact, where possible, with all referrals, has been strongly illustrated by the following figures—in 1962 the number of initial interviews was 1,302, whereas in 1963 the total was 1,848. Follow-up admissions and interviews increased by 490 and 890 respectively. The existing waiting list is 1,421.

Co-operation by medical officers and other officers of the School Medical Service enabled follow-up investigations and referrals to be effectively carried out for all new cases, and with further emphasis on the benefit of dual assessments the speech therapist participated jointly with medical officers to give more adequate services to country and special referral cases.

Regular staff meetings have been continued, and personal contact maintained by the Senior Speech Therapist with all clinics, including Wollongong and Newcastle.

Statistics relating to the work of Speech Therapy Clinics during 1963 are set out in Tables 6 and 6A.

Medical Assessment of Children with Speech Defects

Medical assessments, with dual interviews by a school medical officer and speech therapists, were held again regularly during 1963. A total of 97 visits were made to the seven clinics in the metropolitan area to evaluate 376 children—276 boys and 100 girls.

This was an increase of 173 on the number of cases seen in 1962, there being a significant rise in the number of children from country districts.

As previously, the patients were referred to the clinics by paediatricians, general practitioners, dentists, school medical officers, school nurses and education authorities. A considerable number of parents made personal application for treatment.

Counselling and advice were offered to all parents at the initial dual interview which seems to serve an important purpose, in that, in many cases, it is the only interview that is necessary.

Contact was made with the children's teachers in all cases requiring treatment, to inform them of the children's attendance at the clinic, to seek information concerning any associated learning difficulties and also to offer advice concerning the management of the speech defect in the school situation.

Elements of emotional disturbance were detected in many cases and 14 children were referred to a Child Guidance Clinic after the first interview and others have since been referred for further advice and treatment. Conversely, a number of children were referred for speech therapy following treatment at a Child Guidance Clinic.

Rapport was maintained with the Division of Guidance and Adjustment and with the Commonwealth Acoustic Laboratory, 18 cases being referred to the former clinic and three to the latter, for further evaluation after the initial interview. More have since been referred after a period of observation and therapy. A few children were referred to specialist neurology clinics.

Of the 376 children with speech defects, 167 had dyslalia; 80 were stammerers; 1 had clutter; 18 showed slow speech development (with or without intellectual retardation); 39 had sigmatism; 7 had had cleft palates and now exhibit residual speech defects; 2 showed hypernasality; 3 dysphonia and 1 dysarthria. There were 5 in the aphasic group and 34 children had dual speech defects.

Fifteen of the presenting children were considered to have a speech pattern within normal limits. The parents of this group were advised and the children are to be seen again only if the parents become worried later.

One hundred and fifty-two children were accepted for regular speech therapy, a further 177 are to be seen at intervals, on a follow-up basis, and 24 are to be reviewed later.

Where full parental co-operation is available, the response to therapy is good. Indeed, the present scheme of appraisal, treatment and follow-up appears to be a most satisfactory one. Parents react favourably, in general, to the advice tendered and appear appreciative of the efforts made for their children.

HEARING CLINIC

The Hearing Clinic at the Head Office of the School Medical Service continued throughout the year, ten sessions being held weekly until 4th September, when it was reduced to nine sessions a week, attended by six ear, nose and throat specialists.

Children were referred to the clinic by paediatricians, school medical officers, speech therapists, the Division of Guidance and Adjustment, Department of Education, Aborigines' Welfare Board, Department of Child Welfare, out-patient departments and public hospitals, doctors in general practice, parents, and school principals and teachers.

A total of 1,535 new cases were examined, this number being made up of 902 boys and 633 girls. The number of cases reviewed was 1,849—979 boys and 870 girls. Detailed information of these cases is contained in Table 7.

As the clinic is a diagnostic one and no treatment is carried out, children with treatable deafness are referred to their local doctor or an out-patient department of a public hospital for consultation with an ear, nose and throat specialist.

Children with hearing defects, who would benefit from the use of a hearing aid, are referred to the Commonwealth Acoustic Laboratory. These are supplied free of charge to school children.

Children with severe deafness requiring special education are referred to the Division of Guidance and Adjustment for placement in classes for deaf children. The Counsellor for the Deaf, an officer of the Department of Education, is in attendance one day weekly for consideration of educational problems associated with deafness.

ASTHMA CLINIC

The Asthma Clinic continued to function during 1963. The total number of appointments for consultation with children already under treatment was 1,125, of which number 1,009 appointments were kept.

In addition to the ordinary routine work of the clinic, the general survey of results of treatment which was begun in 1954 was continued, and completed for those children who undertook treatment in 1961. Surveys of those children who began treatment in 1962 and 1963 were begun but could not be fully completed as each survey is based on a two-year period of review.

It was noted that a considerable number of those children who undertook treatment in 1963 had been recommended to the clinic by either the parents or other relatives of children who were already under treatment or who had received treatment in earlier years. In addition, there were more children recommended by teachers who had observed the improvement in health of children who had returned to school following treatment at the clinic.

The total number of appointments for initial consultation (that is, new patients) from 4th February to 31st December was 192, of which number 161 appointments were kept and consultations held. Of these, the number of children who subsequently undertook treatment was 62.

The results obtained in the survey of 74 children who commenced treatment in 1961 indicated that 44 children remained under treatment for a period of two years or more, 20 gave it up within a period of three months to two years and 10 gave it up within three months.

Results obtained in 44 children who remained under treatment for two years or more:—

	No. of Cases	Percentage
Excellent	23	52.27
Very much improved	8	18.18
Much improved	8	18.18
Improved	5	11.37
No improvement .. .. .	..	..
	44	100

Results obtained in 20 children who remained under treatment for periods of from three months to two years:—

	No. of Cases	Percentage
Excellent .. .. .	..(None classified as such as not under treatment for the full period of two years or more)	
Very much improved	4	20
Much improved	2	10
Improved	14	70
No improvement .. .. .	..	..
	20	100

Results obtained in 10 children who gave treatment up within three months:—

	No. of Cases	Percentage
Excellent	} None classified as such owing to short time under treatment.	
Very much improved		
Much improved		
Improved		
No improvement	9	90
	1	10
	10	100

INFECTIOUS DISEASES, OTHER ILLNESSES AND ACCIDENTS

During 1963, 37,233 cases of injury and 266,541 cases of illness, other than infectious disease, were reported amongst pupils attending Departmental schools, necessitating respectively an average absence from school of 1.00 and 1.12 weeks. The figures for 1962 were 29,863 cases of injury and 202,826 cases of illness.

Table 8 shows the number of pupils in Departmental schools who suffered from the common infectious diseases in each year from 1954 to 1963, and the average absence from school for each disease during 1963. The figures indicate a slight decline in chicken pox, influenza, acute rheumatism, poliomyelitis and hepatitis compared with 1962. There was no variation in mumps, but an increase was shown in the cases of measles, German measles, whooping cough, scarlet fever, diphtheria, sore throat, acute conjunctivitis and meningococcal meningitis.

During 1963, 4,393 children were notified as suffering from impetigo, requiring an average absence of 1.39 weeks; from ringworm, 3,175, average absence 1.95 weeks; scabies, 84, average absence 1.63 weeks; and pediculosis capitis, 1,592, average absence 1.67 weeks. In all these conditions there was a slight increase in numbers compared with 1962.

The number of children who were absent from school as contacts of infectious diseases during 1963 totalled 5,374, compared with 4,197 in 1962.

No serious epidemic of infectious disease occurred in any Departmental school during the year.

CONTROL OF TUBERCULOSIS IN SCHOOLS

Close liaison was again maintained with the Division of Tuberculosis in regard to tuberculosis occurring in school children and teachers. Each case is notified, followed up and supervised by this Division, while the necessary action for control of the disease is carried out by the Division of Tuberculosis.

During 1963, there were 15 cases of tuberculosis amongst school children (13 pulmonary and two extra-pulmonary). One case of tuberculosis occurred in a teacher. These figures compare with 25 cases in school children and one case amongst teachers in 1962.

The review of teachers who had a history of tuberculosis and the campaign for the control of tuberculosis in teachers were carried out by the new Medical Examination Centre, and the results will be found in the Annual Report of that Centre.

MEDICAL EXAMINATION OF TEACHERS AND TEACHERS' COLLEGE ENTRANTS

The School Medical Service carried out the general administrative medical work of the teaching service of the Department of Education up to 20th May, 1963. All files and records of this section were transferred to the Medical Examination Centre of the Department on this date, and the figures for the total year will be shown in the Annual Report of that Centre.

MEDICAL EXAMINATION OF SPECIAL GROUPS OF CHILDREN

Special medical examinations were arranged at Head Office for children referred for investigation and/or advice by medical practitioners, teachers and parents, because of special health problems; also by the Department of Education, including children for examination as to their fitness for admission to special schools or classes; and also for advice regarding the educational problems of children with handicaps, either physical, mental or intellectual. The examinations were carried out by medical officers experienced in paediatrics, and the diagnosis and evaluation of these special problems.

Similar examinations are carried out in each of the Child Health Centres, the details of which appear in the individual sections of this Report.

Children were also examined at the request of the Department of Child Welfare, Dalwood Homes, the Aborigines' Welfare Board, and the Far West Children's Health Scheme. With the exception of the last two referring agencies, all children were accompanied by parents, who were also interviewed and given advice regarding their children's management and schooling. In all cases, a full report was forwarded to the referring agency.

The total number of medical examinations of special groups of children carried out during the year was 2,845,965 at Head Office (946 in 1962); 419 at Child Health Centre, Forest Lodge (509 in 1962); 741 at Child Health Centre, Parramatta (638 in 1962); and 720 at Child Health Centre, Bexley (80 in 1962—only in operation for three months).

All children admitted to the Stewart House Preventorium were given a full paediatric assessment by trained medical officers of this Service. The number examined during 1963 was 1,109 (590 boys and 519 girls).

Immigrant children sponsored by the Little Brother and Fairbridge Farm Schemes were medically examined at the Immigration Centre immediately on arrival in New South Wales, on behalf of the Department of Child Welfare.

In addition, this Service is able to assist the Department of Child Welfare in expressing opinions on the medical fitness of persons wishing to adopt children.

TEACHERS' COLLEGES

During the year 1963, nine medical officers were seconded to Teachers' Colleges in New South Wales: six full-time and three part-time. The vacancy for a part-time medical officer at Wagga Wagga Teachers' College was not filled.

Students were given a course of lectures on School Health and First Aid, and use was made of visual aids in the form of films, which included those on the School Medical and Tuberculosis Services. In addition, filmstrips, slides, charts, posters and models were employed, and students were issued with pamphlets produced by the Department of Public Health.,

The textbook, *School and Community Health* was in general use in 1963.

In colleges with Primary Courses, and some with Secondary Courses, demonstration lessons were conducted, and medical officers attended practice teaching. The students were required to pass an examination in School Health and First Aid prior to receiving their Teaching Certificates, and the most competent student in each college was awarded a prize in this subject.

A new syllabus in School Health was prepared by two of the college medical officers, and approved by the Public Service Board.

There was an increase in numbers of students taking Secondary Courses at Sydney, Alexander Mackie and Newcastle Teachers' Colleges.

All students on scholarship were under medical supervision, and students who were absent due to sickness were referred to the medical officer on return to college. Injured or sick students were also examined, and referred either to their own doctor, or if necessary, to the nearest hospital. Special interviews and counselling were provided for students with family, personal or study problems, and where necessary, referrals were made to the Medical Examination Centre for specialist advice.

All students were X-rayed or Mantoux tested on admission to college, and students with a positive Mantoux reaction were referred for X-ray.

In the second half of 1963, 2,599 students were medically examined for permanent appointment to the teaching service, as against 2,210 in 1962.

The numbers of students enrolled at the colleges and the information concerning the attendance of medical officers at the various colleges are set out hereunder:—

College	Enrolment	Medical Officers
Sydney	1,304 College 1,435 undergraduates	2 full-time.
North Newtown	654	1 full-time.
Balmain	263	1 part-time.
Orange Grove	85	1 part-time.
Alexander Mackie	March-Sept. 490 Sept.-Dec. 240	1 full-time.
Armidale	586 College 283 undergraduates	1 full-time.
Bathurst	371	1 part-time.
Newcastle	680 College 231 undergraduates	1 part-time.
Wagga Wagga	391	No medical officer.
Wollongong	279	1 part-time.

NATIONAL FITNESS CAMPS

Three nurses from the School Medical Service continue to be attached for duty at National Fitness Camps. The camps are at Point Wolstoncroft, Broken Bay and Myuna Bay. These nurses supervise the health of the children attending the camp, attend to all cases of accident or sickness, give talks on hygiene and general health matters to the children, and assist in the general overall supervision of the sanitation and hygiene of the camp itself. A report on all these matters is forwarded to the Director of the Division at the end of each camp.

CONCLUSION

My thanks are due to all members of the School Medical Service for their co-operation and assistance in carrying on the activities of the Service during the year.

TABLE 2—NUMBER OF PUPILS WHO WERE FULLY EXAMINED OR WHOSE CASES WERE REVIEWED IN THE METROPOLITAN AREA, REMAINDER OF STATE AND NEW SOUTH WALES, 1961, 1962, 1963

	Metropolitan Area			Remainder of State			New South Wales		
	1961	1962	1963	1961	1962	1963	1961	1962	1963
Primary—									
Full Examination—									
Kindergarten and Grade I ..	37,719	36,813	26,747	20,833	27,162	23,519	58,552	63,975	50,266
Others	10,080	20,057	11,541	28,425	37,549	25,790	38,505	57,606	37,331
Total: Full Examinations ..	47,799	56,870	38,288	49,258	64,711	49,309	97,057	121,581	87,597
Reviews	67,792	58,131	27,677	10,986	23,800	24,113	78,778	81,931	51,790
Grand Total	115,591	115,001	65,965	60,244	88,511	73,422	175,835	203,512	139,387
Secondary—									
Full Examination—									
Year 1	20,246	654	506	10,895	4,146	2,697	31,141	4,800	3,203
Year 4	5,898	8,468	1,512	2,643	2,635	1,368	8,541	11,103	2,880
Others	13,460	14,208	32,905	8,277	11,206	18,588	21,737	25,414	51,493
Total: Full Examinations ..	39,604	23,330	34,923	21,815	17,987	22,653	61,419	41,317	57,576
Reviews	18,237	21,024	16,454	4,726	10,532	8,086	22,963	31,556	24,540
Grand Total	57,841	44,354	51,377	26,541	28,519	30,739	84,382	72,873	82,116
Total Full Examinations	87,403	80,200	73,211	71,073	82,698	71,962	158,476	162,898	145,173
Total Reviews	86,029	79,155	44,131	15,712	34,332	32,199	101,741	113,487	76,330
Grand Total	173,432	159,355	117,342	86,785	117,030	104,161	260,217	276,385	221,503

TABLE 3—NUMBER OF PUPILS WHO WERE FULLY EXAMINED OR WHOSE CASES WERE REVIEWED, AND SCHOOL POPULATION, IN METROPOLITAN AREA, COUNTRY AND NEW SOUTH WALES, 1963

	Metropolitan Area		Country		Total	
		Percentage		Percentage		Percentage
Primary Schools—						
Population	309,668	.....	274,461	.....	584,129	.....
No. of Full Examinations ..	38,288	12·36	49,309	17·97	87,597	15·00
No. of Reviews	27,677	8·94	24,113	8·79	51,790	8·87
Secondary Schools—						
Population	146,428	.....	107,032	.....	253,460	.....
No. of Full Examinations ..	34,923	23·85	22,653	21·16	57,576	22·72
No. of Reviews	1,6454	11·24	8,086	7·55	24,540	9·68
Total—						
Population	456,096	.....	381,493	.....	837,589	.....
No. of Full Examinations ..	73,211	16·05	71,962	18·86	145,173	17·33
No. of Reviews	44,131	9·68	32,199	8·44	76,330	9·11

TABLE 4—DEFECTS OF NOTIFIABLE STANDARD FOUND IN PUPILS FULLY EXAMINED, 1963, AND EXPRESSED AS A PERCENTAGE

No. Examined	Primary		Secondary		All Pupils	
	Boys	Girls	Boys	Girls	Boys	Girls
	45,054	42,543	30,037	27,539	75,091	70,082
Defects—						
Vision	4.82	5.38	7.26	9.07	5.79	6.83
Squint	0.99	1.06	0.55	0.58	0.82	0.87
Hearing	4.05	3.44	2.66	2.23	3.49	2.97
Nose and throat	4.58	4.70	2.32	2.42	3.68	3.80
Skin	2.35	2.35	2.55	3.53	2.43	2.82
Thyroid	0.11	0.32	0.19	1.11	0.14	0.63
Heart—circulation	0.69	0.70	0.59	0.91	0.65	0.78
Lungs	3.99	3.18	2.56	1.70	3.42	2.59
Asthma	3.00	1.91	3.35	2.17	3.14	2.01
Development—Hernia	1.95	0.58	0.90	0.21	1.53	0.44
Orthopaedic	1.97	1.65	2.06	2.34	2.01	1.92
Nervous system	0.41	0.34	0.43	0.40	0.42	0.36
Psychological	1.26	0.90	0.54	0.55	0.97	0.76

TABLE 5—STATISTICS RELATING TO WORK OF CHILD GUIDANCE CLINICS, 1963

Location of Clinic	Brisbane Street	Camper-down	Forest Lodge	Parramatta	Bexley	Newcastle	Yasmar
Case load—							
(a) Continued from 1962 to 1963..	537	58	113	177	32	89	..
(b) New cases 1963	1,244	360	268	402	159	331	676 (Referred)
(c) Reviews, etc. not included above	387	..	7	..	..	89	255 (Committed).
Total	2,168	418	388	579	191	509	931
(d) Closed during 1963	951	288	205	354	140	228	..
(e) Cases current at 31-12-63 ..	977	109	158	139	40	169	..
(f) On waiting list 31-12-63 ..	240	21	25	86	11	112	..
Continued to 1964 (e) + (f)	1,217	130	183	225	51	281	..
Age Groups—New Cases—							
Male	621	198	195	280	117	215	931
Female	623	162	73	122	42	116	..
Total	1,244	360	268	402	159	331	931
0— 5 years	151	33	18	57	14	53	3
6—11 years	512	166	162	238	75	177	86
12—15 years	541	114	82	96	63	68	395
Over 15 years	40	47	6	11	7	33	192
Total	1,244	360	268	402	159	331	
Source of Referral—							
Personal application	438	161	49	60	8	40	All referred from Children's Courts and Department of Child Welfare.
Children's Courts	192	88	1	1	15	12	
Department of Child Welfare..	8	7	10	7	2	14	
Department of Education	142	42	88	84	3	49	
Hospitals, Social Agencies, etc.	79	17	17	36	10	31	
Medical practitioners	82	24	16	110	8	66	
School Medical Officers, Nurses, etc.	293	14	69	88	107	113	
Speech Therapists	10	7	18	16	6	6	
Total	1,244	360	268	402	159	331	

TABLE 6—STATISTICS RELATING TO THE WORK OF SPEECH THERAPY CLINICS, 1963

	Newcastle		Parramatta		Bexley		Padding- ton	Forest Lodge		Water- loo	Glen- field Park	Camper- down	Willoughby		Wollon- gong	Beauty Point	Total
	No. 1	No. 2	No. 1	No. 2	No. 1	No. 2		No. 1	No. 2				No. 1	No. 2			
Under treatment 1-1-63	37	116	194	203	20	30	124	88	18	22	12	103	30	19	22	129	210
No. of first interviews	182				119	146			31	73	4		186	65	85		1,848
Admitted or re-admitted to treatment— current																	
Admitted for follow-up only	62	74	49	54	32	43	76	52	19	37	4	34	54	8	51	32	681
Total cases treated 1963	66	104	109	87	45	109	46	55	5	54		43	59	8	42	36	868
No. of Reviews	165	178	158	141	97	182	122	107	42	113	16	77	143	35	115	68	1,759
	142	117	159	118	94	137	51	111	55	126		68	129	45	101	24	1,477
Total No. of attendances, 1963	1,450	1,164	1,184	1,056	1,109	1,373	1,543	1,671	930	1,415	348	680	1,259	599	1,295	570	17,646
Failed to continue treatment	13	6	5	7	2	4	1	8	9	3			7		15		82
Transferred to other clinics	8	5		5			4	8		1			3	1	3		41
Discharged under observation—Re- lieved—Current	48	27	29	24	20	69	33	17	16	39	4	5	51	19	26	7	434
Discharged follow-up	41	33	40	12	28	57	19	37	9	49		7	45		54	18	449
Awaiting first interview	26	5	623		251		10	218		28		8	134		115	3	1,421
Under treatment 31-12-63	30	36	15	18	30		38	19	12	16	12	24	23	7	29	25	334

TABLE 6A—ADDITIONAL INFORMATION RELATING TO THE WORK OF SPEECH THERAPY CLINICS, 1963

Classification of speech defects seen during 1963—

Disorders of Voice—

Aphonia	..	..	..	..	..	..	..	..	..
Dysphonia	..	..	..	..	..	..	..	..	16
Nasality—Hyper and Hypo	..	..	..	..	..	..	..	..	23
Cleft Palate	..	..	..	..	..	..	..	..	34

Disorders of Articulation—

Dyslalia	..	..	..	..	..	..	..	..	777
Sigmatism	..	..	..	..	..	..	..	..	141
Structural Articulatory Defects	..	..	..	..	..	..	..	..	22
Hearing Loss	..	..	..	..	..	..	..	..	50
Dysarthria	..	..	..	..	..	..	..	..	27

Disorders of Language—

Alalia	..	..	..	..	..	..	..	..	23
Dyslalia associated with language problems	..	..	..	..	..	..	..	..	132
Aphasia	..	..	..	..	..	..	..	..	21
Dysphasia	..	..	..	..	..	..	..	..	10

Disorders of Fluency—

Primary Stammering	..	..	..	..	..	..	..	..	141
Secondary Stammering	..	..	..	..	..	..	..	..	283
Cluttering	..	..	..	..	..	..	..	..	5
Stammering and Dyslalia	..	..	..	..	..	..	..	..	54
									1,759

Referrals for further investigation—

Child Guidance Clinic	..	..	..	..	..	..	..	..	72
Hearing Clinic	..	..	..	..	..	..	..	..	117
Division of Guidance and Adjustment, Department of Education	..	..	..	..	..	..	..	..	73
Psychologist, School Medical Service	..	..	..	..	..	..	..	..	16

TABLE 7—FIGURES RELATING TO WORK OF HEARING CLINIC, 1963

	Total number	Hearing normal	Deafness due to remediable conditions	Chronic deafness	Treatment recommended or receiving treatment	Wearing Hearing Aid	Hearing Aid recommended	Recommended for O.D. Class	Recommended for School for Deaf, North Rocks
New Cases—									
B. ..	902	259	418	101	336	31	5	15	12
G. ..	633	209	321	70	244	26	5	10	9
Total..	1,535	468	739	171	580	57	10	25	21
Reviews—									
B. ..	979	429	293	109	189	20	4	..	..
G. ..	870	479	240	100	166	10	5	1	1
Total..	1,849	908	533	209	355	30	9	1	1

TABLE 8—NUMBER OF CASES OF COMMON INFECTIOUS DISEASES IN DEPARTMENTAL SCHOOLS, 1954-1963

	Measles	German Measles	Whooping Cough	Scarlet Fever	Diphtheria	Sore Throat	Chicken Pox	Mumps	Influenza	Acute Conjunctivitis	Acute Rheumatism and Chorea	Polio-myelitis	Meningo-coccal Meningitis	Hepatitis
1954	..	36,080	1,210	477	144	27,482	12,577	24,480	98,665	946	1,007	190	54	*
1955	..	7,229	2,184	411	63	30,953	22,733	14,623	93,334	1,543	1,090	83	63	..
1956	..	30,202	3,132	478	34	29,790	15,513	9,052	79,595	2,119	1,095	120	47	..
1957	..	8,484	1,270	450	31	35,571	19,518	14,616	211,793	2,043	945	34	44	..
1958	..	22,389	1,036	658	29	40,016	18,090	32,207	82,632	2,849	925	35	65	..
1959	..	31,513	1,696	514	7	46,668	17,163	15,110	178,918	3,512	746	23	50	..
1960	..	13,823	1,902	465	8	53,383	29,778	10,514	112,426	5,293	801	7	45	1,458
1961	..	31,203	1,560	323	14	53,068	15,405	20,882	104,570	3,185	603	35	54	1,481
1962	..	14,396	382	317	10	57,847	25,625	16,825	128,559	2,535	604	51	46	640
1963	..	33,572	528	459	28	64,256	23,077	16,597	106,657	2,977	597	11	54	581
Average absence in weeks 1963	2.18	1.48	2.85	2.55	4.15	0.94	2.04	1.88	0.86	0.96	3.74	5.98	3.48	4.06

* Figures not available prior to 1960.

School Dental Service

The new static dental clinics at Adamstown, Parramatta, Hurstville, Naremburn and Wollongong functioned well throughout the year, although due to existing staff vacancies maximum efficiency was not maintained at Hurstville, Adamstown and Wollongong. Two additional mobile dental clinics were completed during the year, and two caravans were received gratis from the Anti-Tuberculosis Association for conversion to dental surgeries. An additional two new units are on order, the prime movers having already been received. Again, maximum use was not made of these vehicles because of staff shortages. The proposed amendment to the Dentists' Act will probably adjust this during 1964.

School Dental Officers contacted a total of 786 schools during the year. Of these 99 were in the metropolitan area and 687 in the country.

Numerous children from other schools were treated at the Stewart House Dental Clinic, Curl Curl.

In a survey of 88,011 Infants' and Primary school children, officers found that only 7.9 per cent were naturally dentally fit. A further 21 per cent were dentally fit as a result of previous treatment, and 71.1 per cent were in actual need of treatment at the time of examination. A further 13,447 children, 6 to 9 years of age inclusive, were examined by Travelling Dental Clinics prior to offering free treatment. Of these 70 per cent were dentally unfit, and only 9.7 per cent had naturally healthy dentitions: 73 per cent accepted the free treatment offered.

The usual advisory service was maintained to the Child Welfare Department and Aborigines' Welfare Board throughout the year. The annual inspection of aboriginal children was made at the Summer Camp at La Perouse. Two mobile dental clinics were also made available to the Australian Dental Association for treatment of children at the Far West Camp at Manly in January.

Posters and pamphlets were distributed in schools, and the usual lectures given at the Teachers' Colleges, Mothers' Clubs, Parents and Citizens' Association groups, classes, etc.

A new curriculum on Health Education in Infants' and Primary Schools was finalised. It is gratifying to note that similar consideration is being given to the requirements in Secondary schools by the Health Education Advisory Council.

Aerial Dental Service: The Division continued to co-operate with the Royal Flying Doctor Service, N.S.W. Section, in providing a dental service in outback areas. An annual subsidy of £2,500 is paid to this organisation to provide air transport for the dental teams and equipment. A road dental clinic was used to treat areas in, and closer to, Broken Hill. The Dental Officers travelled 25,000 miles by air and 15,000 by road during the year.

Schools Visited	Station Homesteads Visited
Balranald	Arrabury, Queensland.
Broken Hill—	Angepena, South Australia
Alma	Cordillo Downs, South Australia
Burke Ward	Cawnalmurtee, South Australia
Central	Durham Downs, Queensland
Morgan Street	Frome Downs, South Australia
Railway Town	Innamincka, South Australia
Hillston	Muloorina, South Australia
Ivanhoe	Nappa Merrie, Queensland
Kinalung	Nocundra, Queensland
Manara Mine	Orientos, Queensland
Menindee	Omricon, South Australia
Moulamein	Wertaloona, South Australia
Pooncarie	Wirrealpa, South Australia
Roto	Wooltana, South Australia
Rufus River	
Silverton	
Tibooburra	
Wanaaring	
Wentworth	
White Cliffs	
Wilcannia	

The aerial dental service treated 648 patients in 3,416 visits. Nine hundred and thirty-nine teeth were extracted; 3,599 fillings and 2,074 other treatments were provided.

The gross output of the School Dental Service during 1963 was, as under:—

Examinations	..	..	..	..	..	..	..	..	107,595
Notified	..	..	..	..	..	..	..	..	62,484
New Cases	..	..	..	..	..	..	..	..	14,202
Visits	..	..	..	..	..	..	..	..	55,423
Extractions	..	..	..	..	..	..	..	..	21,715
Fillings	..	..	..	..	..	..	..	..	59,429
Other treatments incl. prophylaxis				..	..	..	..	..	58,317
Dentures	..	..	..	..	..	..	..	..	21
Orthodontic appliances			..	..	..	..	..	..	70

Institution Dental Services

The usual regular dental service was maintained to all Psychiatric and State Hospitals, Penal Establishments, Child Welfare Department Homes, and Randwick Chest Hospital.

Child Welfare Department: New dental clinics were included in plans for new buildings at "Anglewood", Bowral, and at "Werrington Park", St. Marys. It was necessary in the latter part of the year to change the Dental Officers on regular Child Welfare duties. There was a minimum of interruption to the service.

The total output of work in Child Welfare Department Homes was:—

[illegible]

State Hospitals and Homes: A new dental clinic complete with X-ray was completed at Allandale Hospital during 1963, and is now in regular use. Strickland House, Vacluse, was included in the activities of the Division during the year.

Total output of work in State Hospitals and Homes and Chest Hospital:—

[illegible]

Psychiatric Hospitals: All Psychiatric Hospitals were visited regularly by Dental Officers during the year. The regular system of oral prophylaxis at Peat and Milson Islands was maintained. At the end of the year arrangements were finalised for this work to be undertaken by female staff. The improved chairside assistance at Parramatta, Kenmore and Gladesville Hospitals was appreciated.

Total dental work achieved in 1963:—

Examinations	..	..	..	..	..	..	..	..	11,782
New Cases	..	..	..	..	..	..	..	..	1,924
Visits	..	..	..	..	..	..	..	..	10,255
Extractions	..	..	..	..	..	..	..	..	5,782
Fillings	..	..	..	..	..	..	..	..	2,280
Other treatments incl. prophylaxis				..	..	..	..	..	5,270
Dentures	..	..	..	..	..	..	..	..	449
Denture repairs	..	..	..	..	..	..	..	..	366
General anaesthetics		..	..	..	..	..	..	..	12

Penal Establishments: The Penal Establishments including those in country areas, received organised visits by Dental Officers throughout 1963. The new clinic at East Maitland Prison, constructed by the inmates, functioned most satisfactorily.

Total work achieved was:—

[illegible]

CONCLUSIONS

The investigations of the dental condition of school children throughout the State during the year continued to support the need for more adequate dental services and particularly the fluoridation of public water supplies, with a minimum of further delay.

It is encouraging, therefore, that some action will be taken as a result of the special committee which made recommendations during the year, and that Government Policy may correct the delay in fluoridation. It is in these two respects that the Division of Dental Services wishes to draw particular attention.

DIVISION OF DENTAL SERVICES ANNUAL REPORT, 1963

	School Dental Service	Mental Hospitals	State Hospi- tals and Homes	H.M. Gaols	C.W.D. Establish- ments	Total
Examinations	107,595	11,782	2,043	3,565	3,222	128,207
Notifications	62,484	....	....	....	....	62,484
New Cases	14,202	1,924	832	1,250	1,471	19,679
Visits	55,423	10,255	2,781	3,741	7,123	79,323
Extractions	21,715	5,782	2,183	2,979	3,831	36,490
Fillings	59,429	2,280	352	595	5,025	67,681
Other Treatments including						
Prophylaxis	58,317	5,270	1,953	1,671	5,633	72,844
General Anaesthetics .. ..	....	12	30	....	....	42
Dentures	21	449	174	135	383	1,162
Denture Repairs .. ..	....	366	41	92	74	573
Orthodontic Appliances ..	70	....	....	....	....	70

NUTRITION

Nutrition Section—Annual Report, 1963

STAFF

(As at 31st December, 1963)

Senior Dietitian: Miss R. STERN, M.Sc. (Pretoria), M.Sc. (Ohio).

Three Dietitians; One Secretary to the Nutrition Section and the New South Wales State Nutrition Committee.

FUNCTIONS AND RESPONSIBILITIES

The Nutrition Section is responsible to the Director of State Health Services for the interpretation of the findings of recent nutrition research to the lay public and for the dissemination of information on nutritional requirements in health and disease, food values and costs, cooking methods and the organization of food services.

ACTIVITIES DURING THE YEAR

(a) Press Articles, Broadcasts and Telecasts

Regular weekly articles and radio scripts (200-400 words) were prepared for circulation to Editors and approximately 300 Country and Suburban newspapers and 40 radio stations.

Tape recordings were made for the Women's Sessions for the Regional Broadcasts of the Agricultural Bureau of New South Wales.

A special article was prepared for the Departmental Bulletin *Health in New South Wales* and a chapter on nutrition for a new Science textbook.

(b) Publications

Publications were revised when necessary for reprinting. These included "Food and Nutrition" and the Low Cost Food Budget.

New material for gluten free diets was prepared and the gluten free diet revised.

(c) Lectures and Talks

A total of 10 (1½ hour) lectures and eight cookery classes were given to junior and senior Trainee Nursing Assistants and four lectures were given to a group of male attendants at Lidcombe State Hospital.

Two courses of 10 lectures were given to Kindergarten and the Sydney Day Nursery Training College Students.

Three courses of four lectures were given to nurses at the Karitane Mothercraft Training Centre and a course of four lectures to the Public Health Nurses at Forest Lodge Child Health Centre.

For the New South Wales Agriculture Bureau talks were given at Women's Sessions of the Divisional Convention at Wallabadah and Doylson.

Special talks were given to other organizations. They included the house parents of the Doctor Barnardo Homes, the Mothers' Club of the Rockdale Day Kindergarten, members of the Monash B'hai B'rith Women's Chapter, the Mothers' Clubs of the Ellen Desailly Kindergarten at Glebe, the provisional Parents and Citizens' Association of the Caringbah North High School, members of the Drummoyne Presbyterian Women's Evening Guild, members of the A.N.Z. Youth Group of the B'hai B'rith Lodge, members of the United Association of Women, members of the Mountbatten Branch of the Voluntary Aid Detachment and the Mothers' Club and 600 children of the Nowra Primary School.

Two half-hour demonstrations on infant feeding were given during Health Week at the Sydney Town Hall.

(d) Maternal and Baby Welfare

Seven pre-natal clinics were attended weekly. They were at Manly, Narrabeen, Liverpool, Seven Hills, Blacktown and two pre-natal clinics at Parramatta.

The three pre-natal diets were revised.

(e) Clinic for Overweight Children

This clinic at Forest Lodge Child Health Centre was continued.

(f) Enquiries

Many enquiries on all aspects of food and nutrition were received, e.g., school lunch canteens, etc.

The majority of requests for therapeutic diets were for weight reduction, diabetes and heart disease.

(g) Institutions

Work is still proceeding on the review of ration scales and food service standards in the State Prisons.

Four Nursery Schools of the Sydney Day Nursery Association were visited to advise on cycle menus, standardization of recipes, equipment and layout requirements.

Visits were made to Liverpool Primary School to advise on food sold in the School Canteen and to Stewart House Preyentorium at Curl Curl to advise on the adequacy and suitability of meals served.

(h) Survey Work

The report on the Survey of the dietary habits of 700 young adults; including office workers, shop assistants, factory workers and apprentices in heavy industry, University Students and Trainee Teachers was completed.

The first draft of the Report on the Dietary Survey of 10-year-old children in various Metropolitan Schools has been prepared.

(i) Student Dietitians

One student Dietitian training at Royal North Shore Hospital spent two weeks in the Section, during which time a special programme was arranged for her, while two Colombo Plan students spent a morning in the Section to learn of the nutrition work done by the State Health Department.

(j) Trainee Dietitians

Three trainee dietitians were working in the Section during the Christmas University Vacation. Various educational activities were arranged for them.

(k) New South Wales State Nutrition Committee

The executive and secretarial work of the New South Wales State Nutrition Committee continued to be carried out during the year.

The Report of the Dietary Survey of Young Adults was presented to the Minister for Health. A copy of the Report was also published in the Commonwealth booklet *Food and Nutrition—Notes and Reviews* which has a wide scientific circulation in Australia.

The Draft Report on the Dietary Survey of 1,200 10-year-old school children in the metropolitan area of Sydney has been prepared by the Committee.

(l) New South Wales Institute of Dietitians

The executive and secretarial work of this Committee was recommenced in October, 1963.

THE PHYSICALLY HANDICAPPED

Consultative Council for the Physically Handicapped—Annual Report, 1963

MEMBERSHIP

Following the revision of the functions and activities of the Council, with appointment of additional members, towards the end of 1962, the membership of the Council at the beginning of 1963 was as follows:—

Members:—

Mr. J. R. W. Danks (Chairman).
 Dr. J. C. Fulton (Deputy Chairman).
 Dr. G. G. Burniston.
 Dr. T. M. Greenaway.
 Dr. A. E. Machin.
 Dr. E. S. A. Meyers (Director of State Health Services).
 Dr. S. Scougall.
 Dr. Keith Smith.
 Dr. S. E. L. Stening.

Co-opted Members:—

Mrs. J. Lee-Martin.
 Miss K. Ogilvie—representing the Australian Association of Social Workers.
 Miss G. E. Sims—representing the Australian Association of Occupational Therapists.
 Miss P. Wood—representing the Australian Physiotherapy Association.

Mrs. J. Lee-Martin is also a full-time member of the staff of the Council as Occupational Therapist.

Death of Dr. Keith Smith

Towards the end of the year, the Council learned with deep regret of the death of Dr. Keith Smith and placed on record its sincere appreciation of the assistance given by Dr. Smith over the many past years of his association with the Council's work.

STAFF

The staff of the Council has remained unchanged, as follows:—

Medical Officer and Secretary.
 Occupational Therapist.
 Shorthand-writer and Typist.

Early in the year, the services of Miss D. Huggett, Social Worker, Department of Public Health, were also made available to the Council on a part-time basis.

MEETINGS

As was decided in connection with the review of its functions and activities, the Council met on the first Thursday of each alternate month during 1963, instead of each month as previously. Six ordinary general meetings were held—in February, April, June, August, October and December. In addition, a special general meeting of the Council was held on the 21st March, 1963, to consider the report of a Sub-Committee which had been set up by the Council to enquire into the situation arising from the occurrence of congenital malformations in infants associated with ingestion of the drug thalidomide by the mothers during pregnancy.

CONGENITAL MALFORMATIONS ASSOCIATED WITH THALIDOMIDE

A survey carried out by the Department, through the Division of Maternal and Baby Welfare, in the latter part of 1962, disclosed 19 babies who had been born in New South Wales with congenital malformations definitely or probably associated with the drug thalidomide, of whom 9 had died and 10 had survived. In addition to these, there were 9 other surviving babies born in this State with congenital malformations either not associated, or only doubtfully associated, with thalidomide. The Minister agreed that the matter of the problems arising from these congenitally malformed babies, and the question of assistance which might be required to be given in these cases, should be referred for the consideration of the Consultative Council for the Physically Handicapped.

These matters were considered by a Sub-Committee set up by the Council, consisting of Dr. J. C. Fulton (Chairman), Dr. S. E. L. Stening and Dr. G. G. Burniston. Dr. J. F. M. Furber, Orthopaedic Surgeon, was later invited to assist the Sub-Committee. The Sub-Committee's report and recommendations were, in due course, endorsed by the Council and submitted to the Under Secretary. After further discussion at a conference convened by the Under Secretary, comprising the members of the Sub-Committee, the Director of State Health Services (Dr. E. S. A. Meyers), and the Medical Officer, Repatriation Artificial Limb and Appliance Centre, Sydney (Dr. D. C. Caine), a final report and recommendations were submitted to the Minister.

Subsequently, following acceptance by the State Government of arrangements proposed by the Commonwealth Government for the provision of assistance to these thalidomide affected children, the Royal Alexandra Hospital for Children in Sydney was asked to set up a special clinic for the examination, and the medical and social assessment, of such children in order to determine their immediate and future needs.

The first such clinic was held on the 31st August, 1963. The parents of all known children with "thalidomide type" congenital malformations were informed by letter and invited to bring the children to this clinic. The medical panel consisted of Dr. S. E. L. Stening, and Dr. John Alexander (Paediatricians), Mr. David Dey (Paediatric Surgeon), Mr. D. Whiteway (Orthopaedic Surgeon), Dr. R. A. Klein (Medical Director, Central Development Unit, Repatriation Artificial Limb and Appliance Centre, Melbourne), Dr. D. C. Caine (Medical Officer, Repatriation Artificial Limb and Appliance Centre, Sydney) and Dr. G. G. Burniston (Director of Rehabilitation Medicine, Prince Henry Hospital, Sydney). Dr. H. Downes (Commonwealth Deputy Director-General of Health), Dr. E. S. A. Meyers (Director of State Health Services) and Dr. J. C. Fulton (Chief Executive Officer and Medical Superintendent, Royal Alexandra Hospital for Children, Sydney) were also present.

Eighteen children attended the clinic. One child known to be in need of assistance for upper limb malformations was away on holidays and was unable to attend.

Following this first assessment clinic it was decided that a special clinic, to be known as the Amputee Clinic, should be set up and held monthly at the Royal Alexandra Hospital for Children, and that the examining medical panel in attendance at this clinic should consist of Mr. Whiteway, Dr. Klein, Dr. Caine and Dr. Burniston. The Clinic would be mainly concerned with the prescribing and fitting of artificial limbs and appliances.

Any children with congenital malformations are eligible to attend the Amputee Clinic, but only those whose malformations were definitely or probably caused by thalidomide will be covered by the terms of the agreement between the Commonwealth and State Governments.

Limb prostheses prescribed at the Amputee Clinic will be made at the Repatriation Artificial Limb and Appliance Centre. Where a prosthesis is indicated, the financial circumstances of the family will be assessed and the case will be referred to the Consultative Council for the Physically Handicapped for recommendation as to whether the proposed prosthesis is appropriate and as to assistance which will need to be provided by the State.

The oversight of these children from all aspects, including their eventual preparation for employment, will be maintained by regular follow-up at the Amputee Clinic and by overall supervision by the Consultative Council for the Physically Handicapped.

Of the 18 children seen at the first assessment clinic on the 31st August, it was recommended that 12 should continue to attend the Amputee Clinic and that the remainder should continue to be attended by private medical practitioners or should attend other appropriate clinics at the Royal Alexandra Hospital for Children.

The first Amputee Clinic was held on the 9th September, 1963, and this was followed by two special clinics on the 7th November and 11th November, 1963. These two special clinics were attended by Dr. D. S. McKenzie, Medical Officer and Research Medical Officer of the British Ministry of Health, Limb Fitting Centre, Roehampton, England, who had been invited to Australia by the Commonwealth Government in conjunction with the Post Graduate Committee in Medicine of the University of Sydney. Dr. McKenzie, together with the medical panel consisting of Mr. Whiteway, Dr. Klein, Dr. Caine and Dr. Burniston, reviewed the children who had been seen at the first assessment clinic in August, with particular attention to those requiring prostheses and appliances.

Following the examination and assessment of children with congenital malformations carried out at this series of clinics, 9 children in all have, at the time of writing, been referred to the Consultative Council as requiring prostheses and appliances prescribed by the panel of specialists and consultants. These children presented a variety of forms of amelia, hemimelia, phocomelia, adactylia and hemidactylia. In two cases there was definite evidence of ingestion of thalidomide by the mother during pregnancy, and in five cases it was probable that thalidomide had been ingested. In the remaining two cases there was no evidence of any likely association with thalidomide.

SURVEY OF FACILITIES FOR REHABILITATION IN NEW SOUTH WALES

At its April meeting, the Council agreed to a proposal by Dr. E. S. A. Meyers that the Council should carry out a complete and comprehensive survey of all existing facilities in New South Wales for the rehabilitation of physically disabled and handicapped persons. It was proposed that the survey should cover all age groups and that the Council should, in due course, make recommendations as to any further facilities which may be required.

It was agreed that this survey could best be carried out by a working party organised by Dr. Burniston and a Sub-Committee was later set up consisting of Dr. G. G. Burniston (Chairman), Dr. J. C. Fulton and Dr. E. S. A. Meyers. Dr. R. I. Meyers, Senior Medical Officer, Rehabilitation Branch, Commonwealth Department of Social Services, was co-opted to assist in the planning of the survey.

At a first meeting of the Sub-Committee held on the 13th August, the whole scope of the survey was broadly discussed and a number of matters which would arise in relation to the planning of such a survey were more particularly considered. It was agreed that the first step would be the preparation, by Dr. Burniston and Dr. R. I. Meyers jointly, of questionnaires to be sent to Therapy Training Schools, Hospitals, Social Service Agencies, etc.

Following a subsequent meeting of the Sub-Committee a questionnaire was sent to organisations and institutions conducting training courses for Physiotherapists, Occupational Therapists, Speech Therapists and Social Workers. Only one reply had been received by the end of the year. Completion of a second questionnaire, proposed to be sent to hospitals and other institutions and organisations concerned with rehabilitation was deferred for later consideration.

ASSISTANCE TO PHYSICALLY HANDICAPPED PERSONS

During the year, 107 new applications for assistance to patients by payment of fees for physiotherapy were approved by the Council, a substantial increase over the corresponding figure of 79 during 1962.

The major causes of disability in these cases were as follows:—

Paralysis or paresis from cerebral vascular lesions	57
Osteoarthritis and rheumatoid arthritis	13
Ankylosing spondylitis	2
Hemiparesis and dementia from fractured skull	1
Quadriplegia from diving accident	1
Quadriparesis from cervical spine lesion	1
Paraplegia from upper thoracic spinal cord lesion	1
Spastic paraplegia	1
Fractures of neck of femur	9
Fractured pelvis	1
Volckmann's ischaemic contracture	1
Below knee amputation	1
Multiple sclerosis	5
Past poliomyelitis	4
Parkinsonism	2
Peroneal paresis	3
Osteotomy of femur for Paget's disease	1
Progressive muscular atrophy	1
Polymyositis	1
Polyneuropathy	1
	<hr/>
	107

These new applications were in addition to applications for extension of courses of physiotherapy in the case of patients already under treatment after initial acceptance for assistance by the Council.

In the case of children suffering from the results of past poliomyelitis who come from country districts for admission to the Drummond Home at Manly for after-care, under the Far West Children's Health Scheme, the Council gives financial assistance towards physiotherapy carried out by the staff of physiotherapists at the Home. These children are not included in the above figures.

Patients visited and treated by the Occupational Therapist during the year numbered 65, of whom 25 were new patients referred during 1963, while 40 were patients remaining under treatment since 1962. Causes of disability included hemiplegia and paraplegia, osteoarthritis and rheumatoid arthritis, past poliomyelitis, fracture of neck of femur, multiple sclerosis, muscular dystrophy, Parkinsonism, cerebellar tumour, chronic motor neurone disease and cervical disc lesion. The total number of visits made to patients by the Occupational Therapist during the year was 740.

REPRESENTATION ON OTHER ORGANISATIONS

The Medical Officer and Secretary continued as the delegate, and the Occupational Therapist as the alternate delegate, representing the Consultative Council for the Physically Handicapped on the Council of Social Services of New South Wales; and the Occupational Therapist continued to serve on that Council's Standing Committee on Employment Problems of Physically Handicapped Persons.

The Occupational Therapist also continued to act as representative of the Consultative Council for the Physically Handicapped on the Rehabilitation Co-ordinating Council of New South Wales.

CONFERENCES AND MEETINGS

On the 18th September, the Medical Officer attended a Seminar on "Modern Trends in Prosthetics" arranged by the Commonwealth Repatriation Commission and held in Melbourne. Speakers at the Seminar were Dr. Robert A. Klein, Medical Director, Central Development Unit, Repatriation Artificial Limb and Appliance Centres ("Present Art and Future Trends in Australian Prosthetics" and "Overseas Developments"), Dr. Richard E. Spielrein, Senior Engineer, Central Development Unit ("Experiments in Ambulation of Bilateral Lower Extremity Amelia"), and Dr. John A. Gleave, Medical and Health Department, Harcourt Medical Centre, Hong Kong ("Prosthetics in Asia").

On the 25th September, the Occupational Therapist attended the Annual General Meeting of the Council of Social Service of New South Wales.

On the 21st October, the Occupational Therapist attended the Annual General Meeting of the New South Wales Society for Crippled Children.

Visit of Dr. Frank Cooksey

On the 23rd October, members of the Council who were able to attend at rather short notice had a brief meeting and discussion with Dr. Frank Cooksey, O.B.E., M.D., F.R.C.P., Director of Physical Medicine, Kings College Hospital, London, who was then visiting Australia.

CONCLUSION

The Council's work has been assisted by co-operation with other organisations concerned with the after-care and rehabilitation of the physically handicapped, and the Council has appreciated the ready assistance of physiotherapists in private practice who have undertaken the treatment of patients on the Council's behalf.

HEALTH DISTRICTS

Metropolitan Health District

STAFF

(as at 31st December, 1963)

Metropolitan Medical Officer of Health—Dr. A. DOUGLAS, LL.B., M.B., Ch.B., D.P.H., D.T.M. & H.

Two Senior Health Inspectors, eight Health Inspectors, two Cadet Health Inspectors and thirteen Food Inspectors.

General

The District covers an area of 982,042 acres and comprises thirty-five Municipalities, including the Cities of Sydney, Parramatta, Liverpool and Penrith; four Shires (Hornsby, Warringah, Sutherland and Baulkham Hills); and the Harbour of Port Jackson.

VITAL STATISTICS

The population of the District at 30th June, 1963, was 2,382,460 an increase of 48,020 over the figures for 1962.

There were 46,556 live births equal to a rate of 19.53 per 1,000 of mean population.

Deaths numbered 22,820, equal to a rate of 9.57 per 1,000 of mean population.

The four main causes of death were Diseases of the Heart (8,906), Malignant Neoplasm (3,534), Vascular Lesions affecting the Central Nervous System (3,097) and Accidents, Poisoning and Violence (1,441).

Note: The figures relating to causes of death are for the statistical Sydney Metropolitan Area—cause of death figures are not available for the Metropolitan Health District.

Maternal deaths numbered 11, equal to a rate of 0.24 per 1,000 live births.

Deaths under one year of age totalled 846, equivalent to a rate of 18.17 per 1,000 live births.

The population of the City of Sydney again declined. It decreased during the year from 170,600 at 30th June, 1962, to 168,800 at 30th June, 1963, a fall of 1,800. The density decreased from 23.82 to 23.57 persons per acre. Of the thirty-nine Local Government areas in the District the population increased in thirty-two and decreased in seven. The decreases were slight, except in the City of Sydney (1,800) and the Municipalities of Marrickville and North Sydney where the populations declined by 500 and 470 respectively. The largest increases in the population occurred in Liverpool (5,540), Blacktown (4,980), Warringah (4,960) and Sutherland (4,950).

The highest density of population was recorded in the Municipality of Waverley where the figure was 29.30 per acre.

TABLE I—LIVE BIRTHS AND DEATHS WITH RATES—1962 AND 1963

Category	1962		1963	
	Number	Rate*	Number	Rate*
Live Births.. .. .	46,608	19.95	46,556	19.53
Deaths	22,491	9.62	22,820	9.57
Males	(12,150)	....	(12,135)	....
Females	(10,341)	....	(10,685)	....

* Per 1,000 mean population

TABLE II—INFANT AND MATERNAL MORTALITY WITH RATES—1962 AND 1963

Category	1962		1963	
	Number	Rate*	Number	Rate*
Infant Mortality	944	20.25	846	18.17
Maternal Mortality	18	0.39	11	0.24

* Per 1,000 live births

TABLE III—SELECTED CAUSES OF DEATH—SYDNEY METROPOLITAN AREA—1962 AND 1963

Cause of Death	1962		1963	
	Number	Rate*	Number	Rate*
Diseases of the Heart	8,778	3,957	8,906	3,945
Malignant Neoplasms	3,246	1,463	3,534	1,565
Vascular lesions affecting the Central Nervous System ..	3,034	1,368	3,097	1,372
Accidents, poisonings and violence	1,446	652	1,441	638
Pneumonia	655	295	681	302
General Arteriosclerosis	320	144	379	168
Bronchitis	424	191	456	202
Nephritis and Nephrosis	193	87	209	93
Diabetes Mellitus	311	140	297	132
Hypertension without mention of Heart Disease	173	78	185	82
Ulcer of the Stomach and Duodenum	152	69	134	59
Senility	75	34	61	27
Tuberculosis	136	61	116	51
Infections of Kidney	195	88	220	93
Cirrhosis of Liver	138	62	119	53
Influenza	36	16	12	5
Gastro Enteritis and Colitis, except Ulcerative and Diarrhoea of Newborn	54	24	39	17
Alcoholism	42	19	37	16
Arthritis and Rheumatism, except Rheumatic Fever	46	21	38	17
Syphilis and its Sequelae ..	26	12	17	8

* Rate—per million of mean population

TABLE IV—COMMUNICABLE DISEASE NOTIFICATIONS WITH DEATHS, 1962 AND 1963

Disease	1962		1963	
	Cases	Deaths	Cases	Deaths
Acute Anterior Poliomyelitis	147	8	2	..
Ancylostomiasis	1	..	2	..
Ascariasis	7	..	3	..
Brucellosis	5	..	8	..
Rheumatic Chorea .. ..	..	..	1	..
Dengue Fever .. ..	..	..	..	..
Diphtheria .. ..	..	..	27	2
Infectious Hepatitis	1,697	12	1,921	12
Infantile Diarrhoea	61	9	244	18
Leptospirosis .. ..	..	..	1	..
Meningococcal Infection	17	10	26	7
Ornithosis	3	..	2	..
Paratyphoid Fever	2	..	5	..
Typhoid Fever	5	..	6	..
Puerperal Fever	8	3	22	1
Rheumatic Fever	11	4	1	..
Scarlet Fever	132	..	234	..
Typhus Fever .. ..	..	..	..	..
Tuberculosis	929	139	836	116
Virus Encephalitis	10	8	33	8
Staphylococcal Mastitis	1	..	1	..
Staphylococcal Pneumonia	26	18	24	20
Staphylococcal Infection in Infants under 4 weeks of age	492	1	472	..
Total	3,554	212	3,871	184

COMMUNICABLE DISEASES

(a) Diphtheria

There was an upsurge in the number of diphtheria cases reported in the Metropolitan Area during this year, mainly centred in the Fairfield and Bankstown Municipalities. Twenty-seven cases occurred resulting in two deaths, all of the twenty-seven were found to have an unsatisfactory immunisation history. Councils, particularly in the areas concerned, were encouraged to step up their immunisation programmes and were advised on the quickest means of achieving a satisfactory immunisation state for the children. It was ensured that close contacts cases were examined and given prophylactic treatment where it was indicated.

A Committee under the Chairmanship of Dr. E. S. A. Meyers was set up to consider the immunisation status of children in New South Wales. This Committee recommended that a Schick Test Survey should be carried out among kindergarten children attending Metropolitan State Schools. At the close of the year plans were well in hand to commence the test as soon as the children returned to school.

(b) Infectious Hepatitis

Notifications of infectious hepatitis increased to 1,921 cases in 1963, following the low figure of 1,697 in 1962. There were 12 deaths.

TABLE V—CASES AND DEATHS—INFECTIOUS HEPATITIS—1959-1963

Year				Cases	Deaths
1959	..	..	..	1,040	12
1960	..	..	..	2,123	8
1961	..	..	..	2,424	14
1962	..	..	..	1,697	12
1963	..	..	..	1,921	12

(c) Typhoid and Paratyphoid Fever

Six cases of typhoid fever and five cases of paratyphoid fever were notified during the year. Investigational work was undertaken to find the source and prevent any spread of the disease.

ENVIRONMENTAL SANITATION

Staff

As the Chief Health Inspector is now responsible to the Metropolitan Medical Officer of Health for work carried out in the District, Head Office staff is shared between the Metropolitan Health District and those areas in the State not included in an established Health District.

Towards the end of the year two positions as Senior Health Inspector, Head Office, were established and filled by Senior Health Inspectors from the North and South Coast.

The volume of work carried out in the District has been limited by the shortage of experienced Health Inspectors in the Branch. Except for complaints to the Minister, it has not been possible in all instances to investigate fully, complaints made to this Department by the public. Such complaints were generally referred to the Local Authority for investigation and report even in instances where the complainant had had unsatisfactory dealings with the Local Authority originally on the matter.

The number of septic tank applications and complaints have increased and occupied the greater portion of the Health Inspectors' time. A large proportion of the complaints received concerned unsatisfactory drainage disposal in the unsewered areas. Unfortunately, some Councils have not given attention to this matter, have been lax in requiring proper drainage facilities, and have permitted the direct discharge of household waste water into street gutters and watercourses with consequent serious nuisance. Amendments to the Local Government Ordinance have been sought to prevent such practices.

Overcrowding and insanitary housing were the subject of many complaints. At the peak of a flea plague in some sections of the District, numerous enquiries were received daily for advice on eradication and control measures.

The number of sites not recommended for septic tanks reflects the tendency towards subdivision into small allotments with consequent drainage disposal difficulties. The larger Councils in unsewered areas have established tanker removal services and convey very large volumes of effluent to depots for disposal.

Special Investigations

Lead Poisoning

Samples of flaking paintwork from homes were collected for analysis in connection with an investigation of lead poisoning possibly caused by consumption of such paint by small children.

Stream Pollution

Because of the staff position, it has not been possible to carry out large scale systematic sampling and checking for pollution of rivers and harbour. A number of Local Authorities were requested to carry out the sampling programme, but this has not been entirely satisfactory. Whenever possible, sampling is carried out by Departmental Officers.

Sampling of Mussels

In conjunction with water samples, specimens of mussels were collected from Middle Harbour, Lane Cove and Parramatta Rivers and submitted to the Departmental Laboratories to ascertain their fitness for human consumption. The results revealed that pollution was more widespread than anticipated.

Exhumations

Investigations were carried out into exhumations to ascertain the condition of bodies after varying periods of interment.

Institution Inspections

Here again the pressure of routine work has necessitated a reduction in the number of the above inspections. However, the work is still proceeding and some saving of time has been made by markedly reducing the extent of the report.

Interesting Developments*Garbage Disposal*

From year to year there is increasing difficulty in obtaining suitable sites for sanitary depots for the disposal of garbage in various sections of the Health District. Some developed areas have no suitable sites for such disposal, consequently garbage is being transported long distances through built up areas for disposal at another Council's depot. Good work has been carried out by reclamation schemes using garbage and the sanitary land-fill method. Considerable investigation work was carried out on a large scheme involving garbage reclamation of part of Botany Bay. However, due to pressure by the Department of Civil Aviation which was concerned about the hazard caused to aircraft by flocks of seagulls frequenting such depots, the scheme was held in abeyance.

Intraining Courses

An intraining course in Court procedure for Health and Food Inspectors was held and declared to be most beneficial and of practical use.

A number of Inspectors attended the intraining course in Fluoridation supervision.

Staff Meetings and Conferences

The Senior Health Inspectors now hold regular three monthly Conferences in order to explain and co-ordinate policy.

One or two meetings for Health Inspectors have been held by the Medical Officers of Health to discuss general and specific aspects of work in the Metropolitan Health District.

Routine Work Carried Out

During the year under review, the following work was carried out:—

	1963
Shops and Buildings Inspected	22
Hospitals	18
Institutions }	
Schools }	
Hotels	8
Public Halls and Theatres }	
Swimming Pools	1
Slaughtering Premises and Abattoirs	6
Pet Food Shops	25
Flock and Bedding: (a) Inspection of Premises	29
(b) Samples Collected	6
Camps, Showgrounds and Cemeteries Inspected	26
Sanitary Depots: (a) Proposed	33
(b) Existing	202
Septic Tank Applications Dealt With:	
Approval	6,087
Refusal	1,071
	7,158
Testing of Bores for Disposal of Septic Tank Effluent	8
Septic Tank Sites Inspected	10,701
Septic Tank Installations Inspected	158
Sewage Treatment Works Inspected	8
Infectious Diseases Investigations	10
Nuisance Investigations	419
Specimens Collected (Faeces, Blood, Urine)	80
Samples: Water	448
Sewage effluent, trade waste and other materials	215
Inspection of Noxious Trades Premises	756
Rivers and Beach Pollution	14
Interviews with Architects re sewerage, drainage plans, complaints, etc.	207
Legal Proceedings for Department	6
Appeals successful for Department	1
Fines	£135
Costs	£14

Figures for the Metropolitan Area for 1962 were included in those shown for the work of the Branch and are not available separately.

Work Performed by Pure Food Branch in Metropolitan Area

							1962	1963
Adulteration of Food and Drugs—								
Milk	..	..	..	..	..	..	2,328	2,887
Meat	..	..	..	..	..	..	5,685	3,214
Other	..	..	..	..	..	..	918	792
Total Samples							8,931	6,893
Warning Letters							172	117
Prosecutions							545	636
Food and Drugs Seized as Unfit—								
Fish	..	..	..	..	..	..	32 tons	4 tons
Drugs	..	..	..	..	..	..	5 tons	..
Nuts	..	..	..	..	..	..	..	9 tons
Other	..	..	..	..	..	..	27	16
Total							64	29
Poultry	..	..	..	..	..	..	12,819 head	12,516 head
Inspections—								
Total premises inspected							9,691	8,881
Unclean Premises—								
Warning Letters							355	252
Prosecutions, mainly:								
Insects..							25	23
Exposure								
Smoking on premises								
Other Breaches							220	203

The fall in meat sample figures in 1963 was primarily due to two factors:—

- In that year it was found necessary to restrict analysis of meat samples and the Metropolitan Health District was allocated a total of not more than 80 samples of meat per week, and
- On 21st January, 1963, all Officers of the Metropolitan Health District commenced using the malachite green test for determining the presence of sulphites in meat. This resulted in selective sampling, in consequence of which there was a rise in the number of prosecutions instituted, despite the smaller number of samples taken.

The fall in the total numbers of food samples, other than meat, was primarily due to restriction on analytical facilities for 8 months of the year. The fall or rise in the quantity of food and drugs seized has no significance. On one particular day, hundreds of tons of food might be seized and on the next or succeeding days Food Inspectors might only seize a few tons of deteriorated food.

Apart from this, the overall reason for the fall in figures is that the Metropolitan Pure Food Inspectorate had one Inspector less than its established strength in the year 1963, whereas it was fully staffed in 1962.

Newcastle Health District—Annual Report, 1963

STAFF

(as at 31st December, 1963)

Medical Officer of Health—H. R. DUGDALE, M.B., Ch.B., D.P.H.

Assistant Medical Officer of Health—C. K. NEWMAN, M.D., D.P.H., D.T.M. & H.

One Psychiatrist, one Senior School Medical Officer, two School Medical Officers, one Psychologist, one part-time Psychologist, one part-time Ear, Nose and Throat Specialist, one Senior Health Inspector, one Senior Food Inspector, two Speech Therapists, three Assistant Health Inspectors, one Nurse Inspector, seven School Nurses, five Tuberculosis Nurses, one Chief Clerk, three Office Assistants.

EXTENT OF THE DISTRICT

The Newcastle Health District comprises nine Municipalities, of which Newcastle City is by far the largest, and fourteen Shires. It extends from the Hawkesbury River in the south to the northern boundary of Macleay Shire, where it meets the North Coast Health District. The Western and North Western Health District form the inland boundary.

VITAL STATISTICS

ESTIMATED POPULATION

To 30th June, 1962	..	..	..	..	..	..	474,560
To 30th June, 1963	..	..	..	..	..	..	483,400

BIRTHS

Live					Still		Percentage of all births live & still
Year	Male	Female	Total	Rate per 1,000 of Population	Total	Rate per 1,000 of Population	
1962	5,185	4,968	10,153	21·39	149	0·31	1·45
1963	5,094	4,930	10,024	20·74	144	0·30	1·42

DEATHS

Year	Male	Female	Total	Rate per 1,000 of Population
1962 ..	2,824	1,994	4,818	10·15
1963 ..	2,778	1,948	4,726	9·78

INFANTILE MORTALITY

Year	Deaths under 1 year of age	Rate per 1,000 live births	Deaths within 1 week of birth	Percentage	Rate per 1,000 live births	Deaths within 1 month of birth	Percentage	Rate per 1,000 live births
1962 ..	240	23·64	157	65·42	15·46	180	75	17·73
1963 ..	220	21·95	161	73·18	16·06	0·73	78·64	17·26

ENVIRONMENTAL HYGIENE

Sanitary Surveys

A Sanitary Survey of the Municipality of Taree was completed during the year, and general investigation was made of two other areas.

Flooding

Heavy and continuous rains in the early part of the year resulted in a considerable rise in ground water in the sand bed section of Port Stephens Shire, and indicated the need for a prohibition of building on large tracts of land until such time as drainage and reclamation is affected.

Camping Areas

As far as practicable a general check was made of the large number of holiday camping areas within this District's 200 miles of coast land. Generally these places leave much to be desired and it is evident that there is need for implementation of a code of standards to which Local Authorities, Camp Trusts and Private Enterprise should be required to comply.

Noxious Trades

In an endeavour to locate pig keepers who use putrescible matter as pig food, all Local Authorities responded to an appeal for a check on persons engaged in the collection of waste food. By this means other Local Authorities were made aware of likely unregistered Noxious Traders. Action was then taken to require satisfactory operation and sanitary construction of such premises.

Ground Water Supplies

Checking on and recording of ground water supplies in hitherto unknown locations was carried out during the year.

Fluoridation of Water Supplies

This Office, together with an Officer of the Department of Public Works, investigated the water supplies to Taree-Wingham, Hastings Shire and Dungog Shire in connection with proposed fluoridation. The proposals offered no difficulties and the respective Water Authorities appeared to be sincere in their enquiries.

Septic Tank Applications

							1962	1963
Septic Tanks approved	..	..	..	..	..	..	1,791	1,898
Septic Tanks not approved	..	..	..	..	..	..	54	59

To cope with septic tank applications the whole of the District was zoned and the Staff organised when they paid visits to areas from once a week to once in 3 weeks according to the flow of applications. This scheme has proved successful and as tentative proposals, as well as firm applications, were considered in the field at the time of a visit, the public were given an advisory service, which was appreciated. Work and travelling time were also kept to a minimum.

Septic Tank Effluent Disposal

In the Shire of Gosford septic tank installations on difficult sites resulted in increase in volume of effluent removed by tanker service. Since satisfactory land disposal is not possible, an off-shore system was established, which is on trial for a period of 12 months. Chlorination was also introduced and constant check and observations made to determine the effect and efficiency of this scheme.

Complaints

Approximately 150 complaints were received and either dealt with directly or primarily referred to the Local Authority, and, where necessary, follow-up check was made by this Department. The complaints were varied in subject and nature; however, environmental sanitation was the principle theme. Many related to insanitary drainage into Public Places, and they focus the need for specific consideration of the problem of waste water disposal.

Unhealthy Building Land

This subject is now primarily the concern of Head Office, and the scheme formerly operating in Lake Macquarie Shire has been discontinued.

Scavenging Areas and Depots

As opportunity arose check was made on the existence and accuracy of records of approved and unapproved nightsoil and or garbage scavenging areas and sites used as depots. Steps have been and are being taken to have these matters properly adjusted.

INFECTIOUS DISEASES

TABLE I—COMMUNICABLE DISEASES WITH DEATHS, 1962-1963

Disease	1962		1963	
	Cases	Deaths	Cases	Deaths
Ancylostomiasis	3	..	20	..
Ascariasis	16	1	45	..
Brucellosis	1	..	..	..
Chorea Rheumatic	1	..	..	..
Diphtheria	3	1	11	1
Virus Encephalitis	7	..	..	..
Hepatitis Infections	418	3	158	2
Infantile Diarrhoea	19	4	25	1
Leptospirosis	1	..	7	..
Meningococcal Infection	7	2	6	1
Poliomyelitis A. A.	25	..	..	..
Puerperal Fever	5	..	..	..
Rheumatic Fever	7	3	10	1
Scarlet Fever	21	..	33	..
Staph. Disease in Infants under 4 weeks	8	..	19	..
Staphylococcal Pneumonia	4	4	11	3
Staphylococcal Mastitis	1	..	2	..
Typhoid Fever	1	..	1	..
Pulmonary Tuberculosis	193	28	69	32
Total	741	46	417	41

Diphtheria

Two cases of Diphtheria (*Corynebacterium Mitis*) were notified from Macleay Shire in the first quarter of the year; with an interval of about 10 weeks between each case. Five more cases occurred in April; two in May; and two in June. Two children with an infection, which was resistant, were being treated at home. These cases were removed to Hospital, and examination and swabbing at the Schools discovered four carriers, aged five to seven years, who were also hospitalised. There was one death. No cases occurred in Kempsey itself where, it was estimated, that at least 80 per cent of the children had been immunised. An intensive immunisation campaign was started in the Macleay Shire and the Kempsey Municipality.

Results of treatment (Closed Cases)										1962	1963
Diagnostic only: treatment not required or not offered	..	..	..	..	..	..	..	..	..	193	124
Treatment offered but declined	..	..	..	..	..	..	..	..	..	62	20
Treatment given but results unsatisfactory	..	..	..	..	..	..	..	..	..	45	25
Treatment given, symptomatic improvement	..	..	..	..	..	..	..	..	..	135	56
Treatment satisfactory; good readjustment	..	..	..	..	..	..	..	..	..	12	3
Total	..	..	..	..	..	..	..	..	..	447	228

Speech Therapy Clinics

The appointment of an additional Speech Therapist on 11th February, 1963, made it necessary to acquire additional accommodation. This was provided by the Department of Education at a School in Tighes Hill.

TABLE IV

					1962	1963
Number of attendances	..	..	..	..	1,283	1,450
Hearing Clinic—						
No. of Clinics held	..	..	..	..	56	52
No. of children examined	..	..	..	..	589	573

PRIVATE HOSPITALS ACT

The full extent of the work occasioned by the Private Hospitals Act is now apparent. Apart from inspections of premises, which are often many miles apart, interviews and discussions over new proposals or alterations to existing buildings have occupied a great deal of time. Material improvements have been obtained, or are in progress in most of the Private Hospitals and Rest Homes, and while one or two have shown reluctance, the general standard now is good.

TABLE V

					1962	1963
Rest Homes Inspected	..	..	..	..	11	52
Proposed Rest Homes Inspected	..	..	..	..	..	9
Private Hospitals Inspected	..	..	..	..	6	40
Interviews	..	..	..	..	2	132

MATERNAL AND BABY WELFARE

Early in the year the Baby Health Centres Sisters in Newcastle agreed to hold a discussion group on one evening a month. The Senior District Officer of the Department of Child and Social Welfare, Hospital Consultants, Dr. Kirton, the Speech Therapists and the Senior School Medical Officer each gave of their time. Summaries of the proceedings were later circulated to all the Sisters in the Health District. Largely as a result of these talks the Sisters are being used increasingly for premature baby and paediatric home visiting by the Hospital Consultant, and are themselves referring cases to the Child Guidance and Speech Clinics.

TABLE VI

ATTENDANCES AT BABY HEALTH CENTRES

Year	Total	Hospital Visits	Home Visits	Individual Attendances
1962	104,412	711	2,764	11,884
1963	105,264	757	1,368	12,205

ATTENDANCES AT PRENATAL CLINICS

1962	1,556
1963	3,764

PREMATURE BABIES AND FEEDING DIFFICULTIES

1963	No. notified	49	No. of Home Visits	124
------------	--------------	----	--------------------	-----

ASSISTANT NURSE INSPECTOR

						1962	1963
Baby Health Centres Inspected	..	..	..	..	..	23	88
Sites for proposed Baby Health Centres	..	..	..	..	..	..	8
Interviews with Committees	..	..	..	..	..	..	6

TUBERCULOSIS CONTROL

Chest Clinics

There are seven Clinics in the Area and patients are also seen at Maitland Hospital.

The vacant position for a Sister at Kempsey Chest Clinic was not filled until May, when it was arranged that the North Coast Health District should be responsible for the Macksville Sub-Clinic, and the new Sister would take over Taree, which had previously been worked from Newcastle.

TABLE VII

Attendances					1962	1963
Clinic Sessions	..	..	..	..	490	493
Total Attendances	..	..	..	..	9,556	9,082
Home Visits..	..	..	..	..	3,885	3,615

PURE FOOD ADMINISTRATION

Sampling was very considerably restricted by circumstances beyond the control of this Office, and so it was possible to devote more time to inspections.

Unless conditions were bad enough to warrant prosecutions, all defects were immediately notified to the shopkeeper in the form of a Warning Notice with a copy to the appropriate Local Authority. In many cases the owner subsequently wrote to say that the work had been done, and in a number of Districts the Health Inspector reported.

Considerably more interest in food inspection is being shown by Local Authorities, and the advice of the Senior Food Inspector has been sought when prosecution was contemplated. In one case where the Authority rejected the Report of its Health Inspector and refused to prosecute, the case was successfully taken by the Senior Food Inspector.

Prosecution for selling pies in the street has resulted in the cancellation of Street Trading Permits, and the promiscuous sale of ice cream has been stopped in Newcastle by a substantial increase in licensing fees. It is expected that other Authorities will follow suit.

A number of butchers have been induced to abandon slaughtering at their own premises in favour of District Abattoirs, and four more Authorities are doing meat inspection.

TABLE VIII

									1962	1963
Food Samples	..	..	..	..	..	..	..	..	642	185
Inspections	..	..	..	..	..	..	..	..	1,338	1,327
Notices	..	..	..	..	..	..	..	..	307	414
Complaints	..	..	..	..	..	..	..	..	60	67
Food seized and destroyed	..	..	..	..	..	..	..	..	9,758 lbs.	10,017 lbs.
Prosecutions	..	..	..	..	..	..	..	..	56	52
Fines and costs	..	..	..	..	..	..	..	..	£530	£596

South Coast Health District—Annual Report, 1963

STAFF

(As at 31st December, 1963)

- Medical Officer of Health—EDGAR CHARLES MORELAND WALLACE, M.B., B.S., D.P.H.
Deputy Medical Officer of Health—BERNARD JOSEPH GREEN, M.B., Ch.B., M.R.C.S., L.R.C.P., D.P.H., D.T.M. & H.
2 School Medical Officers; 1 Senior Pure Food Inspector; 2 School Medical Nurses; 1 Senior Health Inspector; 3 Tuberculosis Sisters; 2 Health Inspectors; 1 Assistant Nurse Inspector; 1 Clerk; 1 Speech Therapist; 4 Office Assistants.

Advise was received on 15th November, 1963, that Public Service Board approval had been obtained for the creation of additional positions for one food inspector and one health inspector. These positions have not yet been filled.

VITAL STATISTICS, 1963

Population—The population of the district at 30th June, 1963, was estimated at 305,980.

Live Births—There were 7,221 live births, equal to a rate of 23.60 per 1,000 of population. Of these, 3,681 were males and 3,540 females.

Deaths—Deaths numbered 2,417, equivalent to a rate of 7.90 per 1,000 of population. Of these, 1,429 were males and 988 females.

Infantile Mortality—Deaths under one year of age numbered 146, equivalent to a rate of 20.22 per 1,000 live births.

Of the total number of deaths of infants under one year of age, 97 or 66.44 per cent occurred within one week of birth and 105 or 71.92 per cent within the first month. The corresponding rates per 1,000 live births for the two age-groups were 13.43 and 14.54, respectively.

Stillbirths—There were 88 stillbirths equal to a rate of 0.29 per 1,000 of population and representing 1.20 per cent of all births (live and still).

COMMUNICABLE DISEASES

TABLE I—NOTIFICATION OF COMMUNICABLE DISEASES AND DEATHS—SOUTH COAST HEALTH DISTRICT—1962-1963

Disease	1962		1963	
	Cases	Deaths	Cases	Deaths
Ascariasis	1	..	..	..
Virus Encephalitis	1	..	2	..
Diphtheria .. .. .	..	..	1	..
Infantile Diarrhoea	4	3	13	1
Staphylococcal pneumonia	5	5	1	1
Staphylococcal infection (in infants under 4 weeks) .. .. .	..	..	126	1
Scarlet fever	17	..	..	..
Rheumatic fever	2	2	5	1
Puerperal infection	8	1	6	1
Meningococcal infections	5	1	3	..
Infectious Hepatitis	222	1	239	1
Poliomyelitis	11	3	..	..
Leptospirosis	1	..	..	..
Tuberculosis	99	18	143	12
Total	376	34	539	18

Comment

The incidence of infectious hepatitis did not show the expected decline during 1963, in fact there was a slight increase. An explosive outbreak amongst pupils of the Eden High School which caused some alarm abated rapidly after the whole school population had been given gamma globulin, but no firm conclusions can be drawn from this.

An isolated case of diphtheria occurred in Goulburn. The patient was a married woman in her mid-thirties who had not been immunised. Fortunately her children had all been fully immunised and the outbreak was confined to the individual.

The sharp rise in notifications of staphylococcal infections in infants under four weeks is not due to a rise in the incidence of the infection but to the improved method of notification for hospitals introduced at the beginning of the year.

IMMUNISATION

More Councils have adopted the principle of regular monthly immunisation clinics rather than the irregular and unsatisfactory system of mass campaigns. These clinics have proved very satisfactory. Some Councils too have widened the scope of their immunisation procedures to include diphtheria, pertussis and tetanus. It is hoped to induce more councils to adopt these methods. There is no doubt too that private practitioners have been particularly active in the immunisation of children. The effect of this combined effort was shown by information compiled from School Medical Service record cards. The records examined were for Kindergarten children of several local authority areas of the South Coast Health District. Listed in Table II are the local authority areas examined and the corresponding immunisation rates of children who entered Kindergarten in 1963, for poliomyelitis, diphtheria, pertussis and tetanus respectively.

TABLE II—PERCENTAGE IMMUNISATION RATES OF CHILDREN ENTERING KINDERGARTEN IN REPRESENTATIVE LOCAL AUTHORITY AREAS

Council	Polio	Diphtheria	Pertussis	Tetanus
	per cent	per cent	per cent	per cent
Shoalhaven	93	91	90	87
Eurobodalla	85	76	76	71
Bibbenluke	81	81	81	75
Snowy River	91	86	83	83
Mulwaree	90	89	83	89
Crookwell	95	89	89	89
Gunning	93	83	83	78
Mumbulla	91	88	88	82
Imlay	91	86	88	79
Goulburn	92	91	91	89
Queanbeyan	84	73	70	63
Kiama	92	88	88	81
Bega	94	91	85	85

The issue of single dose poliomyelitis vaccine to local practitioners totalled 4,977 doses for the year.

ENVIRONMENTAL HYGIENE

During the first quarter of 1963 a Sanitary Survey of the Municipality of Bega was carried out. Conditions generally were unsatisfactory but great improvements in this area are anticipated.

Due to staff changes and loss of time from sickness and attendances at training schools and the fact that a vacancy existed unfilled for three months on the Health Inspection staff, it has not been possible to complete the programme of Institutional Inspections during 1963. Routine work is increasing considerably and without an increase in staff it will continue to be difficult to maintain the schedule of annual inspections of the 13 Government Institutions within this District.

Between 3rd and 7th June, 1963, joint inspections were made by the Senior Health Inspector and an officer from Public Works Department with regard to the fluoridation of the public water supplies at Bega, Bemboka, Bermagui, Cobargo and Braidwood.

The District Architect with the Housing Commission, following discussions with the Health Inspectors at this office, agreed to co-operate more fully regarding siting of dwellings and disposal of sullage in new housing projects. It is understood that a direction has been issued in this regard by the Housing Commission.

A Health Inspectors' Conference was held in Nowra on 3rd May, 1963. This was convened by the Medical Officer of Health. The Deputy Medical Officer of Health, Senior Pure Food Inspector, Senior Health Inspector and one health inspector attended from this office. This personal contact with Councils is proving of value.

TABLE III—ROUTINE INSPECTIONS AND INVESTIGATIONS SOUTH COAST HEALTH DISTRICT—1963

Noxious Trades Act	139
Premises (Public Health Act)	81
Water Supplies (Sewage and River Pollution)	46
Inspections of Septic Tank Sites—New	1,696
Inspections of Septic Tank Sites—Existing	188
No. of septic tank applications received	1,778
Inspections of sanitary depots—proposed sites	18
Inspections of sanitary depots—proposed extensions	108
Investigation of complaints	94
Inspections of Public Amenities—Camping areas, parks, reserves and conveniences, swimming pools	289
Inspection of yard areas, closets etc.	87

PURE FOOD ADMINISTRATION

Following a change in staff and administrative directions, the method of work was re-organised at the beginning of the year. The directions which influenced the work programme were:—

- (1) An Advisory and supervisory approach to pure food work with emphasis on encouraging activities by local council officers and closer liaison with them.
- (2) Additional duties involving the inspection and reporting on institutions conducted by this Department, the Child Welfare Department and the Prisons Department.
- (3) Restrictive sampling of food due to laboratory difficulties.

The re-organisation has provided more effective control in areas where co-operation has been obtained (excluding sampling). Co-operation is essential as the establishment of one food inspector for the district could not by any means provide an adequate service. The percentage of meat adulteration remained high throughout the year. Many new shops were opened in the District.

TABLE IV—PURE FOOD WORK IN SOUTH COAST HEALTH DISTRICT—1962-1963

	1962	1963
Advisings to Councils and traders interviews	No record	140
Inspection of premises	1,217	791
Complaints investigated	18	27
Samples of food submitted	429	292
Prosecutions completed	90	72
Fines and Costs imposed	£777	£683

TUBERCULOSIS

Dr. R. Boden, Assistant Chest Physician to the Wollongong Chest Clinic resigned at the end of the year. This position will be filled by Dr. J. E. Thompson. On 25th October, 1963, Sister G. Cripps voluntarily retired from her position of Sister-in-Charge, Wollongong Chest Clinic. Sister B. O'Brien transferred from Gosford Chest Clinic to take up duty as Sister-in-Charge, Wollongong Chest Clinic on 21st October, 1963.

A part-time occupational therapist was appointed to the Wollongong Hospital during the year in a voluntary capacity mainly for tuberculosis patients. This filled a great need, but unfortunately this worker had to resign. She has not been replaced.

Towards the end of the year a proposal to establish a clinic at the Bulli Hospital was examined. It is considered that such a clinic would provide a convenient service for cases and contacts living in the most northern part of the District.

The Bega sub-clinic became a full clinic as from 18th June, 1963, with the appointment of Dr. M. Waters as chest physician. The clinic is not yet properly established however, due to the available accommodation being urgently needed temporarily for another purpose, and because the necessary extra equipment has not yet arrived. The hospital authorities are very co-operative and it is expected that this clinic will soon be functioning adequately.

Good relations were maintained with the Citizens' Tuberculosis League. This organisation is always ready with immediate financial help for destitute cases, and with such activities as a Christmas party for the children of tuberculosis cases.

TABLE V—SUMMARY OF WORK CARRIED OUT AT CLINICS DURING 1963

	Wollongong	Shoalhaven	Goulburn	Moruya	Batemans Bay	Bega
Number of new patients ..	444	20	49	43	3	23
New cases discovered ..	41	5	14	2	2	2
Total number of patients ..	2,988	217	793	113	23	276
Number of Attendances ..	6,141	358	1,077	154	31	307
Number of visits ..	1,033	98	94	38	17	52
Mantoux Tests ..	268	} included in W'gong figures	373	67	21	63
B.C.G. Vaccinations ..	101		14	7	....	3
Number of x-rays ..	3,326	235	752	103	26	71

SCHOOL MEDICAL SERVICE

The year has been one of steady progress. With the appointment of Dr. J. K. A. Hawker on 9th September, 1963, the establishment was brought up to its full strength for the first time in many months. A Hearing Clinic was opened on 7th June, 1963, and up to the end of the year, 148 children had been investigated. A counselling service has been set up in the district office for parents experiencing difficulties with their children in the home or in school and appears to have had considerable success.

The Dental Clinic continued to assist whenever it was called upon to do so, no matter how burdened it was with routine duties.

The Wollongong Hospital, in addition to the free otolaryngological and ophthalmological services provided for necessitous children, has now agreed to extend similar services for all conditions regarded by the School Medical Officers as requiring specialist investigation.

A survey of potentially visually handicapped children was undertaken during the year. In all, 46,562 records were scrutinised. Those who fall within the category of possible handicapped are being followed up and the findings will be the subject of a separate report.

With the examination of schools in Queanbeyan and Crookwell Shire the whole of the Health District is now covered by the School Medical Service. In some areas, because of difficulties in obtaining the service of doctors, examinations are not as regular as is desirable, but improvement may be possible in later years.

School records from Braidwood suggested that Tallaganda Shire might be a goitrogenic area. A survey of the rural schools confirmed this and the local authority was advised to institute a campaign for the use of iodised salt. This was done and appears to have been very successful, the use of iodised salt both for table and culinary purposes being now almost universal throughout the district.

The Department of Education has co-operated fully in rectifying undesirable sanitary features in schools and in making provision for more extensive improvements that were suggested.

The following tables summarise the year's work.

TABLE VI

Schools Examined	Full Exam	Reviews	Parent Interviews	Defects			
				Speech	Eyes	Ears	Others
Departmental Service— 60	7,418	3,652	806	84	512	209	525
Council Scheme— 122	7,071	4,870	250	27	501	236	700

TABLE VII—SPEECH THERAPY CLINIC

	1963
First interviews	74
Review interviews	77
Admitted or readmitted to treatment	42
Discharged	24
Failed to continue treatment	15
Admitted to follow up treatment	37
Follow up cases discharged	53
Visits to school by Therapist	9
Individual attendances at Clinic	1,192
Number awaiting first interview	115

MATERNAL AND BABY WELFARE

Two new Baby Health Centres were opened during the year at Island Bend and Narooma respectively.

Roseby Park Aboriginal Station was inspected with a view to establishing a service there, but because of the conditions obtaining it was decided that this was unnecessary.

The proposal to set up Centres in the local migrant hostels has not been pursued as the present populations do not justify doing this.

Twice weekly talks by Sisters have been given over the local radio station and apparently have proved popular. A weekly Mothercraft talk was commenced in October at the Wollongong Centre. Attendances have varied and it is too early to say how successful these talks will be.

The attendances at the various centres, and visits made are as follows:—

TABLE VIII

No. of Centres	Total Attendance at Centres	Individual attendances at Centres	Hospital Visits	Home Visits (Hrs.)
51	79,634	10,543	472	1,664

PRIVATE HOSPITALS

One new Rest Home was opened during the year at Goulburn and plans approved for another also in Goulburn.

Routine inspections of private hospitals and rest homes numbered 14.

Six routine inspections of Training Schools and twelve inspections of District Hospital midwifery units were undertaken during the year.

MEDICAL EXAMINATIONS

TABLE IX

Year	Number Examined
1962	140
1963	155

SOCIAL HEALTH

The Mentally Ill

This office continues to sponsor the development of the Recovery Movement (for rehabilitation of the mentally ill). A new Recovery Group was formed with the help of the Medical Officer of Health in the Moss Vale area and has since held weekly meetings. The Wollongong Recovery Group continues to meet twice weekly. Because of his personal interest in the welfare of the mentally ill and their families, the Medical Officer of Health has had many requests to visit homes in order to give help and guidance. There have also been many requests to talk to interested gatherings of people such as church groups seeking advice on mental illness.

The Mentally Retarded

Many requests come to this office for advice and help for mentally retarded people. These requests come from a variety of sources—general practitioners, district nurses, voluntary organisations, parents. Assistance continues to be given to organisations such as the Greenacres Day School, the Aid Retarded Persons N.S.W., the Mineral Springs Lodge at Picton and to meetings called from time to time to enlist the public's support.

Alcoholism

The Medical Officer of Health accepted an invitation to join the Committee of the South Coast Alcoholic Clinic. The purpose of this committee is to set up a counselling service on alcoholism, and eventually to establish a residential clinic in Wollongong for the treatment and rehabilitation of alcoholics.

Civil Rehabilitation Committee

The Medical Officer of Health is an active member of this Committee which has given considerable help to discharged prisoners and the families of prisoners still serving their sentence. The Medical Officer of Health at the Committee's request has interviewed and guided ex-prisoners who are mentally or socially inadequate, or who have personal problems for which objective counselling is needed.

Miscellaneous

Other problems of a social nature frequently come to the notice of this office which acts in an investigatory, advisory and guiding capacity. Such problems include those of the aged, the unmarried mother, youthful delinquents and problems affecting migrants.

HEALTH EDUCATION

During the year there have been regular radio talks; commentaries from time to time on topical health matters to the local press and T.V. station; talks to groups of people; and the distribution of literature.

Western Health District—Annual Report, 1963

STAFF

(As at 31st December, 1963)

Medical Officer of Health—T. F. RENNIE, M.B., Ch.B., D.P.H.

Deputy Medical Officer of Health—B. M. NOLAN, L.R.C.P. and S.1, D.P.H.

One Senior Health Inspector; one Senior Food Inspector; two Health Inspectors; one Pure Food Inspector; one Assistant Nurse Inspector; one Clerk—Grade 1; one Office Assistant.

DECENTRALISATION

In February, 1963, The Medical Officer of Health, Western Health District took over the administration of the Private Hospitals in the area.

VITAL STATISTICS

Population—The population of the District at 30th June, 1963, was estimated at 276,000.

Live Births—There were 6,708 live births, equivalent to a rate of 24.30 per 1,000 of population. Of these 3,420 were males and 3,288 females.

Deaths—Deaths numbered 2,576, equivalent to a rate of 9.33 per 1,000 of population. Of these 1,466 were males and 1,110 females.

Infantile Mortality—Deaths under one year of age numbered 174, equivalent to a rate of 25.94 per 1,000 live births.

Of the total number of deaths of infants under one year of age, 100 or 57.47 per cent occurred within one week of birth and 110, or 63.22 per cent within the first month. The corresponding rates per 1,000 live births for the two age groups were 14.91 and 16.40 respectively.

Stillbirths—There were 97 stillbirths, equal to a rate of 0.35 per 1,000 of population and representing 1.43 per cent of all births (live and still).

ENVIRONMENTAL HYGIENE

Inspections of Aborigine Stations and Reserves were continued. It is gratifying to see that wherever possible the recommendations contained in reports are being implemented. Aborigine Welfare Board Officers appear to welcome these inspections and have given their full co-operation during the year.

During inspections of Official Reserves and Stations many unofficial Aborigine camps and settlements have been discovered. An attempt is being made to inspect these areas since standards of sanitation, health and infant care are inevitably low.

The six monthly inspection of Aborigine Stations and Reserves and Government Institutions in the Western Health District, though important, is very time consuming. It may be that the time between inspections will have to be extended beyond six months.

Inspections of Prisons and Child Welfare Institutions have been carried out. Generally standards of hygiene and food handling in these institutions have been found to be reasonably good. Recommendations have been made to repair, renew or modify existing facilities rather than to make any major alterations.

FLUORIDATION OF PUBLIC WATER SUPPLIES

Joint inspections with Officers of the Department of Public Works were made of four areas and it was recommended that fluoridation of public water supplies was possible in each of these areas.

In August 1963, the Municipality of Condobolin commenced fluoridation of its public water supplies. During the year fluoridation of public water supplies in Orange proceeded smoothly. From time to time minor difficulties have been experienced but these have quickly been rectified. It is expected that, as Local Authorities and Officers of this Department gain experience in fluoridation, few difficulties will be encountered in the future.

Owing to the death of Mr. R. McDonough, Senior Health Inspector and the transfer of his successor to the South Coast Health District, the work of Health Inspection has been under the control of three successive Senior Health Inspectors during 1963. In spite of this the volume of work has increased. This may be attributed to an increase in efficiency and relief from restriction in mileage which accompanied the arrival of a Government car.

TABLE I—ENVIRONMENTAL HYGIENE INSPECTIONS, 1962-1963

Inspections Carried out	1962	1963
Septic tanks and closets	762	1,259
Sewerage Treatment Works and Commercial Sullage Scheme	115	31
Garbage and Sanitary Depots	129	188
Noxious Trades	131	200
Abattoirs	5	9
Complaints and Nuisances	47	75
Water Supplies	35	57
Swimming Pools	50	57
Food Premises	43	12
Inspections of Premises, Halls and Hotels	27	56
Aborigine Stations and Institutions.. .. .	18	42
Infectious Disease Investigations	2	1
Miscellaneous Activities	55	75

COMMUNICABLE DISEASES

TABLE II—NOTIFIED COMMUNICABLE DISEASES AND DEATHS—1962-1963

Disease	1962		1963	
	Cases	Deaths	Cases	Deaths
Acute Anterior Poliomyelitis	14	1	1	..
Brucellosis .. .. .	..	..	1	..
Dengue Fever	7	1	..	..
Diphtheria	2	..	..	..
Hepatitis (infectious)	281	1	188	..
Infantile Diarrhoea	11	3	33	10
Meningococcal .. .. .	..	..	..	..
Meningitis	2	1	3	1
Paratyphoid Fever .. .. .	..	..	1	..
Puerperal Fever	5	..	6	1
Rheumatic Fever	4	..	1	1
Scarlet Fever	74	1	48	..
Tuberculosis	85	13	49	9
Virus Encephalitis	11	2	3	1
Staphylococcal Pneumonia	2	2	3	3
Staphylococcal diseases in infants under 4 weeks of age	3	..	..	..
Total	501	25	337	26

There has been a fall in the number of notifications of Infectious Hepatitis and Tuberculosis and a rise in the notifications of Infantile Diarrhoea, during 1963. No general inference can be drawn from this.

Reports of an outbreak of Syphilis at Nanima Aborigine Reserve, Wellington were investigated. Eighty blood specimens were taken. None was found to be W.R. positive.

A small outbreak of “Q” Fever was investigated at Roger’s Meat Works, Orange. Only five cases were discovered. There had been an outbreak of “Q” Fever at this Abattoir early in 1962.

SCHOOL MEDICAL SERVICE

In 1963, twenty-nine (29) Local Authorities in the Western Health District carried out School Medical Examinations in their areas. This is the largest number ever to have undertaken this work in one year.

There were no Departmental School Medical Examinations in 1963 owing to the absence from duty of the part-time Departmental School Medical Officer at Bathurst.

Examinations of Nursery School Children and children in Schools for Sub-Normal children were begun in 1963. This work is being carried out by the Deputy Medical Officer of Health.

Children from schools in Abercrombie Shire were examined in Bathurst, having been transported to a school in Bathurst for this purpose. This is the first time children have been examined outside their schools. This enabled children from the scattered area of Abercrombie Shire to be examined quickly and efficiently.

TABLE III—SCHOOL MEDICAL EXAMINATIONS—1963
Primary and Secondary Schools

Category	Full Examination	Review	Parent Interviews	Total children Examined
Shires	4,037	1,450	231	5,487

Nursery Schools

Number of Schools	Children examined	Parent interviews
3	110	41

PURE FOOD ADMINISTRATION

TABLE IV—PURE FOOD INSPECTIONS, SEIZURES, PROSECUTIONS AND FINES—1963

Category of work carried out											Number
Inspections and complaints .. .. .	..	..	..	..	..	..	..	..	..	..	1,497
Hotels (liquor) .. .. .	..	..	..	..	..	..	..	..	..	..	58
Samples .. .. .	..	..	..	..	..	..	..	..	..	..	387
Notices served .. .. .	..	..	..	..	..	..	..	..	..	..	172
Seizures .. .. .	..	..	..	..	..	..	..	..	..	..	2
Prosecutions {	Pure Food Inspectors		..	..	..	..	..	..	..	..	81
	Council Officers .. .. .		..	..	..	..	..	..	..	..	6
Fines and Costs {	Pure Food Inspector		..	..	..	..	..	..	..	..	£471
	Council Officers .. .. .		..	..	..	..	..	..	..	..	£66 10s. 0d.

In the first half of 1963, a survey of the honey industry in the Western Health District was carried out. Conditions were generally found to be satisfactory.

The appointment of an additional Food Inspector in December should greatly increase the frequency of inspections and improve the control of food premises generally.

It will be seen that Council Officers are being successfully encouraged to undertake prosecutions under the Pure Food Act.

TUBERCULOSIS CONTROL

Several visits were paid to the Western Health District in 1963 by the Director of Tuberculosis for New South Wales. Discussions on various aspects of Tuberculosis control were held with him. All clinics were visited.

A mass Chest X-Ray campaign was commenced in November and December in the eastern section of the Western Health District by this Department. The City of Lithgow and Municipality of Mudgee were gazetted as areas where Chest X-Ray was compulsory.

TABLE V—TUBERCULOSIS CONTROL WORK—1963

Category of Work carried out	Number
New cases discovered	18
Total number of patients	3,123
Total number of attendances	5,725
Number of visits	2,077
Mantoux tests	551
B.C.G.	80

MATERNAL AND BABY WELFARE

This is the first full year of decentralisation of this Division in the Western Health District. Medical Officers and the Assistant Nurse Inspector are now familiar with this work. All Baby Health Centres are now being inspected regularly.

TABLE VI—ATTENDANCES AT BABY HEALTH CENTRES, HOSPITAL VISITS AND HOME VISITS—1963

Attendances at Centres	Hospital visits	Home visits
77,483	1,064	600

In addition, the Assistant Nurse Inspector carried out the following inspections:—

Nurses Training Schools	12
Obstetric Units in Hospitals	29

PRIVATE HOSPITALS AND REST HOMES

The administration, registration and inspection of Private Hospitals and Rest Homes was decentralised in February, 1963.

During the year eleven (11) Private Hospitals and five (5) Rest Homes were inspected.

Standards were found to vary greatly. Many meetings and joint inspections were also held with licensees and prospective licensees concerning alterations and improvements to premises, transfer of licences and suitability of buildings for conversion to Private Hospitals and Rest Homes.

This work is very complex and it may be some time before Officers are fully conversant with it.

PUBLIC RELATIONS

A monthly television programme by officers of the Western Health District is now established at CBN-8 Orange. So far Medical Officers, Health Inspectors and the Senior Food Inspector have taken part.

A conference of Government Medical Officers in the Western Health District was held in December. The conference was addressed by the Director of the Division of Forensic Medicine and was well attended by Government Medical Officers and other doctors from the Western Health District.

Regular conferences of Health Inspectors continue to be held. This year they were held in Lithgow and Dubbo. Subjects discussed were, Public Health Law, Fluoridation of Water Supplies, Food Administration.

MISCELLANEOUS

The Departmental Car had done 17,212 miles during the year. The car is used by all officers as required.

Medical Examinations

Permanent Applications	16
Teachers Casuals	5
Ex Servicemen	3
Fitness for duty	1

North Coast Health District—Annual Report, 1963

STAFF

(As at 31st December, 1963)

Medical Officer of Health—Dr. I. K. HAY, M.B., Ch.B., D.P.H., D.T.M. & H.

Deputy Medical Officer of Health—Dr. D. J. LAW, M.B., B.S., D.P.H.

Two School Medical Officers; two School Nurses; two Tuberculosis Nurses; one Senior Health Inspector; one Health Inspector; one Senior Food Inspector; one Assistant Nurse Inspector; one Clerk; one Office Assistant/Typiste; one Office Assistant.

DISTRICT

The North Coast Health District comprises the following local authority areas:—

Municipalities—Ballina, Casino, City of Grafton, City of Lismore, Mullumbimby.

Shires—Bellingen, Byron, Coff's Harbour, Copmanhurst, Gundurimba, Kyogle, Maclean, Nambucca, Nymboida, Terania, Tintenbar, Tomki, Tweed, Ulmarra, Woodburn.

VITAL STATISTICS, 1963

Population—The population of the district at 30th June, 1963, was estimated at 154,470.

Live Births—There were 3,316 live births in the district, equivalent to a rate of 21.47 per 1,000 of population. Of these, 1,718 were males and 1,598 females.

Deaths—Deaths numbered 1,254, equivalent to a rate of 8.10 per 1,000 of population. Of these, 725 were males and 529 females.

Infantile Mortality—Deaths under one year of age numbered 69, equivalent to a rate of 20.81 per 1,000 live births.

Of the total number of deaths of infants under one year of age 44 or 63.77 per cent occurred within one week of birth, and 50 or 72.46 per cent within the first month. The corresponding rates per 1,000 live births for the two age groups were 13.27 and 15.08 respectively.

Stillbirths—There were 49 stillbirths in the district, equal to a rate of 0.32 per 1,000 of the population and representing 1.46 per cent of all births (live and still).

ENVIRONMENTAL HYGIENE

The summary of the year's work represents an increase of some 15 per cent in respect of routine duties. In addition a considerable amount of work was carried out by the Senior Health Inspector and the Health Inspector in connection with special investigations.

TABLE I—INSPECTION WORK CARRIED OUT IN 1963 WITH COMPARATIVE FIGURES FOR 1962

Inspection											1962	1963
Septic tanks (proposed and existing)	..	..	..	..	..	..	..	..	..	..	801	528
Noxious Trades	..	..	..	..	..	..	..	..	..	..	49	44
Sanitary Depots	..	..	..	..	..	..	..	..	..	..	44	70
Business Premises	..	..	..	..	..	..	..	..	..	..	9	41
Water Supplies and Samples	..	..	..	..	..	..	..	..	..	..	144	532
Sewage Treatment Works	..	..	..	..	..	..	..	..	..	..	9	13
Camping Reserves	..	..	..	..	..	..	..	..	..	..	23	16
Aboriginal Reserves	..	..	..	..	..	..	..	..	..	..	9	4
Scavenging Districts	..	..	..	..	..	..	..	..	..	..	4	2
Complaints	..	..	..	..	..	..	..	..	..	..	20	15
Food Premises, Factories & shops	..	..	..	..	..	..	..	..	..	..	3	10
Other Inspections	..	..	..	..	..	..	..	..	..	..	65	113
Total	..	..	..	..	..	..	..	..	..	..	1,183	1,388

Installations of Septic Tanks

There was a marked fall in the number of applications received for the installation of septic tanks. It is not likely that this trend will be maintained as plans are in hand or completed for water supplies in several areas, including Maclean and Ulmarra.

Water Supplies

The enormous rise in the figures in respect of water supply investigations and water samples taken is due to the increased attention paid during the year to the bacterial purity of supplies, in particular the Rocky Creek reticulation, which provides water for some 30,000 consumers in the City of Lismore, and the Shires of Woodburn, Byron and Terania.

At the conclusion of the twelve-months sampling programme of this supply the Government Analyst confirmed his previous recommendation that "while regular and systematic flushing will do much to improve water quality, purification of the dam water (including filtration) appears necessary". In spite of this recommendation neither the water supply Authority (The Rouse County Council) nor any of the constituent councils saw fit to take any action.

Wherever new water-supplies were being considered, this office instituted preliminary testing, bacteriological and chemical.

On 21st September, 1963, the first stage of the Lower Clarence supply scheme was officially opened at Ulmarra, and work was started on the second stage which will give reticulated water to the township of Maclean.

Fluoridation of Water Supplies

The year was mainly one of consideration, largely abortive, by Councils. Only one Council, the Municipality of Mullumbimby, reached the stage of resolving to adopt fluoridation and requesting a joint inspection.

Sewage Treatment

Laying of sewerage mains throughout the Municipality of Mullumbimby proceeded. The work was under the supervision of Council's Health Inspector, appointed in May, primarily for this purpose.

There was no progress in the proposed sewerage scheme for Tweed Heads, and Council turned its attention, for economic reasons, to the possibility of installing a system of aerobic lagooning.

Worm Infestation Survey

A considerable amount of the Health Inspector's time was occupied towards the end of the year, in the organisation of the collection of stool specimens for this survey, from aboriginal stations and reserves, and from primary schools. A total of 968 specimens was collected.

Agricultural Health

In January an interdepartmental committee consisting of officers of the Department of Agriculture, North Coast Region and the Department of Public Health, North Coast Health District met to consider the problem of the occupational exposure of staff to chemicals or organisms, having a possible detrimental effect on health. This department was represented by the Medical Officer of Health. It was agreed that health officers should visit agricultural stations throughout the district, investigate possible health hazards and report back. Particular attention was paid during these investigations, to the use of Organic Phosphates by over 300 Board of Tick Control employees engaged in dipping and spraying of cattle. In this latter respect arrangements were made for a survey to be carried out locally by officers of the Division of Occupational Health, as a complementary investigation to the laboratory survey carried out by the Commonwealth Health Laboratory in Lismore. The primary purpose of this project will be to determine whether the routine estimation of blood-cholinesterase levels in these employees is a desirable or necessary preventive measure.

The proposed survey of Arsenical poisoning in banana growers was cancelled following the report of a similar, and locally applicable, survey completed in Queensland.

Health Inspectors' Conference

The Annual conference of local authority Health Inspectors and officers of the North Coast Health District was held in the City of Grafton in March. The conference was opened by the Mayor of Grafton, and guest speakers addressed the delegates on "Legal Proceedings", and "Pesticides and their Health Hazards". Subjects discussed included Dairies Inspection, Milk Supplies, Recent Trends in Food Manufacturing and Catering Establishments, Unhealthy Building Land, and Fluoridation. All local authorities employing a health inspector were represented, and it was arranged to hold the 1964 conference in Coff's Harbour.

COMMUNICABLE DISEASES

TABLE II

Diseases	1962		1963	
	Cases	Deaths	Cases	Deaths
Acute Anterior Poliomyelitis	9	..	..	..
Ancylostomiasis	8	..	16	..
Ascariasis	15	..	15	..
Brucellosis .. .. .	..	..	1	..
Dengue Fever	3	..	..	..
Diphtheria	1	..	..	..
Infectious Hepatitis	63	2	24	1
Infantile Diarrhoea	11	1	9	2
Leptospirosis	17	..	5	..
Meningococcal Infection	2	2	2	..
Puerperal Fever	5	..	5	..
Rheumatic Fever .. .. .	..	..	1	1
Rheumatic Chorea .. .. .	..	..	..	..
Scarlet Fever	13	..	..	..
Tuberculosis	43	4	41	6
Typhus Fever	1	..	..	..
Virus Encephalitis	3	3	4	2
Staphylococcal Pneumonia	1	1	1	1
Staphylococcal Mastitis .. .. .	..	..	..	..
Staphylococcal diseases in infants under 4 weeks of age	1	..	4	..
Total	196	13	128	13

Infectious Hepatitis

The continued fall in the number of cases of Infectious Hepatitis is in keeping with the general picture throughout New South Wales.

SCHOOL MEDICAL SERVICE

Following the expansion of the School Medical Service to cover the entire school population of the district, it has been possible to maintain this comprehensive service during 1963.

An overall defect rate of 30.4 per cent was found, compared with 41.0 per cent in 1962. This decrease can be accounted for by the fact that all schools have now been examined for the first time, and consequently the ratio of review examinations to full examinations is much higher.

The Central area, based on Lismore, and the Southern area based on Grafton, were operated under the Departmental scheme, by 2 School Medical Officers, and 2 School Nurses, covering a school population of 31,058.

The Northern area, comprising the local authority areas of Byron Shire, Kyogle Shire, Tweed Shire and the Municipality of Mullumbimby, was operated under the Country Councils' scheme, with the co-operation of two local practitioners and two locally recruited nurses.

TABLE III—ROUTINE SCHOOL MEDICAL EXAMINATION—1963

Data	Central Area	Southern Area	Northern Area	Total (All areas)
School Population	12,754	18,304	10,025	41,083
Schools Examined	52	91	85	228
Full Examinations	3,094	5,350	2,677	11,121
Review Examinations	1,464	2,430	1,278	5,172
Total Pupils Examined	4,558	7,780	3,955	16,293
Defects Notified	1,044	2,395	1,515	4,954
Defects as per cent of No. examined ..	22.68	30.79	38.30	30.40

A survey was carried out during the year with a view to the assessment of the results being obtained by this service, and the results are tabulated below:—

TABLE IV—TREATMENT OF NOTIFIED DEFECTS—1963

Follow-up of Defects	Central Area	Southern Area	Northern Area	Total North Coast Health District
Defects Notified	2,474	1,416	2,493	6,383
Defects Notified and followed up ..	2,053	1,237	1,875	5,165
Defects Notified, followed up and treated	1,006	703	1,277	2,986
Percentage defects treated	49.0	56.8	68.1	57.8

From these figures, which do not include defects already under treatment, it can be stated that routine school medical examinations are, in this District, instrumental in bringing under treatment some 58 per cent of all defects discovered, which were not being given attention at the time of examination. These “defects” include non-immunisation against Poliomyelitis, Diphtheria and Tetanus.

Following discussions, in November, 1962, with the Director of State Health Services, concerning the future development of the School Medical Service in the North Coast Health District, pre-school clinics and “Child Health Clinics” were started in April, 1963. These clinics have been held at Lismore weekly, and on alternate weeks at Casino and Murwillumbah. The pre-school clinics are held at the Baby Health Centres in these towns, and run by the School Medical Officer assisted by the Baby Health Centre Sister. A total of 70 clinics was held at the three centres during the nine-month period and 638 children were seen by the doctor.

The service is a very popular one, appreciated by the mothers and the Baby Health Centre Sisters, and it is considered that it provides very worth-while health supervision of the 2-5 year old age group.

In view of the success of these clinics, arrangements were finalised in December, 1963, to inaugurate another two pre-school clinics in 1964, at Grafton and Coff's Harbour.

The "Child Health Clinics" in spite of publicity and discussions with School Counsellors and others concerned have not been successful, only 37 children having attended the 67 clinics at the three centres. These clinics are held at the District Health Office in Lismore, the Ambulance station in Murwillumbah, and in a room provided by the Council in Casino.

Sanitary conditions in schools were reasonably satisfactory, and many improvements, particularly with regard to sanitation have been effected during the year.

Once again, full co-operation was received from the Education Department, the teachers, local authorities, medical practitioners and all others concerned, and the School Medical Service has become a well-known, well appreciated and accepted feature of the health services in the North Coast Health District.

TUBERCULOSIS CONTROL

From March through August the Anti-Tuberculosis Association of N.S.W. was engaged in a mobile x-ray survey of the eligible residents of this Health District.

All local authority areas were covered with the exception of Nambucca Shire which had been surveyed in late 1962. Of an estimated eligible population of 111,016, some 91,550 persons had chest films taken—an attendance rate of 82 per cent.

The abnormalities detected comprised 23 active and 582 inactive cases of pulmonary tuberculosis and 1,081 non-tuberculous chest conditions including at least 9 cases of carcinoma of the lungs.

Considerable assistance was rendered to the Association particularly in regard to a pre-survey publicity campaign which was continued throughout the period of the survey. The Association expressed the opinion that the very satisfactory attendance rate was materially contributed to by this publicity.

TABLE V—ATTENDANCES AT CHEST CLINICS

Northern Area

	Lismore	Casino	M'Bah	Kyogle	Ballina	Total
1962	1,656	619	799	388	87	3,549
1963	1,562	566	655	359	....	3,142
1963 as percentage of 1962 ..	94	91	86	93	....	90

Southern Area

	Grafton	Coff's Harbour	Maclean	Macksville	Total
1962	1,108	289	146	....	1,543
1963	943	265	143	63*	1,414
1963 as percentage of 1962	86	90	98	....	92

* last quarter only.

The Ballina sub-clinic remained closed throughout the year since a solution to the technical problems associated with the quality of chest films taken at that centre was not forthcoming. The matter is still under consideration. The small number of patients and contacts affected were satisfactorily directed to the Lismore clinic.

The slight overall reduction in attendance figures reflects the suspension of the normal activities at each clinic for short periods during the mobile survey, when the clinic sister's attention was focused on ensuring that adequate arrangements were made for the further investigation of those persons referred by the Anti-Tuberculosis Association.

The anomaly by which the Macksville sub-clinic, although situated in this Health District, was serviced by a Sister attached to the staff of the Newcastle Health District was corrected with the transfer of this sub-clinic to the circuit of the Sister-in-charge of the Grafton Chest Clinic.

Following a request by the local medical practitioners, extended consideration was given to the establishment of a sub-clinic at Bellingen. It was finally decided that this region was adequately serviced by the existing sub-clinic at Macksville and Coff's Harbour.,

Mantoux testing of aborigines was carried out at Cabbage Tree Island Station and Box Ridge and Cubawee Reserve prior to the arrival of the mobile x-ray survey units in the vicinity. Positive reactors were encouraged to present themselves for Chest x-rays and negative reactors were given B.C.G. vaccination.

MATERNAL AND BABY WELFARE

An Assistant Nurse Inspector assumed duty in December, 1963, and commenced initial inspection of Baby Health Centres in the District.

Funds were made available during the year to subsidise replacement of the Baby Health Centres in Lismore and Coff's Harbour, and the erection of a new Centre in South Lismore.

In June 1963, a fortnightly service was started at the C.W.A. Rooms in Woodenbong, run by the Sister from Casino.

PURE FOOD ADMINISTRATION

Much time was spent throughout the year in education of food traders towards a better code of practice. Many traders, particularly in the more remote areas where food premises have never been inspected before, are ignorant of the regulations.

Local authority Health Inspectors are beginning to take a greater interest in pure food administration, as was evidenced by the numerous requests for advice and assistance from these officers. One Council has devoted the major part of one Inspector's duties to food inspection work.

TABLE VI—INSPECTIONS, NOTICES, SAMPLES INVESTIGATED, AND PROSECUTIONS, 1963,
WITH COMPARATIVE FIGURES FOR 1962

Work carried out	1962	1963
Premises inspected	539	529
Warning notices issued	40	57
Samples purchased	170	205
Samples below standard	29	13
Prosecutions completed	63	23
Food placed under seizure in lbs.	14,440	8,000

The 529 premises inspected included food-manufacturing premises and retail food-premises such as butter, bacon, fish, canning, smallgoods, and nut processing factories, and bakeries, butchers' shops, fishmongers' shops, groceries (both wholesale and retail), pharmacies, cafes and hotels, bulk stores and general food stores and establishments.

Warnings, issued in the form of Notices requesting compliance with regulations, were mainly in respect of such matters as: premises insufficiently clean; structural requirements to premises; provision of washing facilities; keeping premises free from rodents; exposure of food on counters and floors; packing kerosene in food containers; receiving second-hand clothing in food premises; storage of eating and drinking containers which were chipped, broken, or cracked; entry of dogs and other animals into food premises; labelling of food; carriage of food in unprotected vehicles; and structural requirements for such vehicles.

In addition to the 205 food samples which were submitted for analysis, 72 malachite green tests were carried out for the presence of sulphites in minced meat.

The 8,000 lbs. of food placed under seizure, and subsequently destroyed by the owners upon request, comprised a wide variety of foodstuffs, including vegetables, and fruit, carcase meats and meat products; canned goods, packaged goods, bottled cordials and soft drinks, and liquor.

The 23 prosecutions completed during the year involved fines and costs totalling £237. This greatly reduced figure, compared with 1962, reflects the emphasis which was placed on education.

During the extensive flooding of the North Coast Health District in May, surveys of the flooded areas were carried out by the Senior Food Inspector in conjunction with the Health Inspectors of the local authorities concerned. With the exception of the City of Grafton damage to food products and premises was slight. All articles of flood-damaged and perished food were removed to Council depots as soon as practicable and certificates of destruction issued to Council as requested. During the floods essential food supplies were satisfactorily maintained.

ABORIGINES' WELFARE

The fortnightly Maternal and Baby Welfare clinic inaugurated in April, 1962, at Cubawee reserve, near Lismore was closed in March, 1963, because of lack of attendances. Although this was disappointing it was not of great significance as the Aborigines' Welfare Board's policy of integration has resulted in all but 2 or 3 of the Cubawee families being housed in the general Lismore community. This development has also resulted in the closure of the Cubawee Primary School, and the assimilation of the aboriginal school children in several primary schools in Lismore.

The outstanding event in this field of Public Health was the start of the Worm Infestation Survey in September, 1963. This survey has been under consideration for some time by the Aborigines' Welfare Board and the Department of Public Health. Its purpose was to determine the present day status of infestation with hookworm and *Ascaris* in North Coast aborigines, with a view to assessment and perhaps review of current control measures.

The survey is being carried out by officers of the School of Public Health & Tropical Medicine, University of Sydney, in co-operation with the North Coast Health District, the Aborigines' Welfare Board, and the Commonwealth Health Laboratory, Lismore. Temporary laboratory accommodation has been provided by the Lismore Base Hospital.

In 1953-54, Dr. T. L. Dunn of the N.S.W. Department of Public Health, surveyed aboriginal and white children in the area from Taree to Tweed Heads and found a hookworm infestation rate of 44.5 per cent and an *Ascaris* infestation rate of 45.5 per cent. Following this survey the Aborigines' Welfare Board instigated the policy of issuing "Entocyl" (piperazine adipate) tablets routinely to all aboriginal children.

The current project will, of course, be the subject of a special report at its conclusion, but it can be said at this stage that findings indicate that this policy has been effective in reducing the incidence of infestation with *Ascaris*, but has had no effect on the incidence of hookworm.

As an integral part of the survey trials will be carried out with another antihelminthic drug, "Alcopar" (bephenium hydroxynapthoate), which is effective against both hookworm and *Ascaris*.

In addition to the examination of all age-groups in selected aboriginal reserves and stations; school children, in aboriginal schools, all-white schools, and mixed aboriginal and white schools are also being examined. Results to date are significant in that it has been shown that the transmission of hookworm, or any other intestinal parasite, is not maintained in mixed schools.

Since the start of the survey excellent co-operation has been received from all concerned, including aborigines, Aborigines' Welfare Board officers, teachers, and parents. The survey will continue until March, 1964.

HEALTH EDUCATION AND PUBLICITY

A steady flow of releases to the press was maintained throughout the year. The majority were issued as comments upon local occurrences affecting the public health. Two matters which again commanded intense local interest were the general subject of fluoridation and the quality of the Rocky Creek Water Supply.

Interested organisations were addressed on eleven occasions on such diverse subjects as the emotional and physical health of the pre-school child, the school child and the aged; the hazards of pesticides and the control of the quality of milk and milk products.

The Medical Officer of Health and a School Medical officer appeared in a Telecast on "Holiday Safety".

MISCELLANEOUS

Poliomyelitis Vaccine Supply

The scheme to maintain a supply of Poliomyelitis vaccine at the district health office, for the use of medical practitioners, retained its popularity. During the year, 7,543 single doses were distributed upon request.

Lectures to Nurses

The course of lectures on Personal and Communal Hygiene for first year trainee nurses attending the Nurses' Regional Training School in Lismore was prepared and given by officers of this Health District. In addition lectures were given on the Social Aspects of Disease, Psychology, Tuberculosis, and Venereal Diseases by the Medical Officer of Health and the Deputy Medical Officer of Health.

Relations with Medical Practitioners

Relations with medical practitioners in the District have been particularly good. This is due to four factors: the appointment of the Deputy Medical Officer of Health to the position of Secretary, Medical Board, Lismore Base Hospital; the close association engendered between District Office staff and practitioners by the Tuberculosis service; the close association with the Nurses' Regional Training School; and the service rendered to practitioners in the supply of Poliomyelitis vaccine.

North Western Health District—Report for the Year Ended 31st December, 1963

STAFF

Medical Officer of Health—Dr. J. HENSON, B.A., M.B., Ch.B., D.P.H., D.T.M. & H.

Deputy Medical Officer of Health—Dr. J. R. WHITFIELD, M.B., B.S., D.P.H.

One School Medical Officer; One Assistant Nurse Inspector; One Senior Health Inspector; One Senior Food Inspector; One Health Inspector; One Tuberculosis Nurse; One School Nurse; One Clerk; One Office Assistant.

THE DISTRICT

There have been no changes in the boundaries or number of Local Government Authorities, consisting of nine municipalities and twenty-one shires.

Councils are becoming increasingly aware of the need to start and develop local public health services. Out of a total of nine Shire Councils without health inspectors, six have now decided to make the necessary appointments. Councils are also turning more and more to this department for advice, guidance and assistance.

VITAL STATISTICS, 1963

(The figures in parentheses are those for 1962.)

Population—The population of the District at 30th June, 1963, was estimated at 154,480 (153,290).

Live Births—There were 3,644 (3,953) live births in this District, equivalent to a rate of 23.59 (25.79) per 1,000 population. Of these, 1,881 (2,024) were males; and 1,763 (1,929) females.

Deaths—Deaths numbered 1,233 (1,303), equivalent to a rate of 7.98 (8.507) per 1,000 population. Of these, 739 (800) were males and 494 (503) females.

Infantile Mortality—Deaths under one year of age numbered 73 (100), equivalent to a rate of 20.03 (25.30) per 1,000 live births, Of the total number of deaths of infants under one year of age, 47 (62) or 64.38 (62.00) per cent occurred within one week of birth; and 50 (73) or 68.49 (73.00) per cent within one month. The corresponding rates per 1,000 live births for the two age groups were 12.90 (15.68) and 13.72 (18.4) respectively.

Stillbirths—There were 56 (52) stillbirths in the District, equal to a rate of 0.36 (0.34) per 1,000 of the population, and representing 1.51 (1.30) per cent of all births (live and still).

ENVIRONMENTAL HYGIENE

Sanitary Inspections in connection with:—

Abattoirs, saleyards and poultry farms	..	..	..	..	..	..	..	..	95
Dwellings and shops	..	..	..	..	..	..	..	..	149
Septic tanks	..	..	..	..	..	..	..	..	481
Dairies	..	..	..	..	..	..	..	..	13
Public institutions	..	..	..	..	..	..	..	..	61
Nuisances	..	..	..	..	..	..	..	..	28
Sanitary depots	..	..	..	..	..	..	..	..	92
Water supplies	..	..	..	..	..	..	..	..	62
Public amenities	..	..	..	..	..	..	..	..	100
Cemeteries	..	..	..	..	..	..	..	..	16
Noxious trades	..	..	..	..	..	..	..	..	170
River pollution	..	..	..	..	..	..	..	..	37
Hotels	..	..	..	..	..	..	..	..	27
Sewage Treatment Works	..	..	..	..	..	..	..	..	31
Aboriginal Stations and Reserves	..	..	..	..	..	..	..	..	21
Samples submitted for tests	..	..	..	..	..	..	..	..	32

Sanitary surveys were carried out in thirty towns and villages in the Peel, Cockburn, Nundle, Murrurundi, Tamarang and Boomi Shires and in Quirindi to assess the work performed by or the need for health inspectors.

Aboriginal Stations and Reserves were re-inspected, as arranged with the Aboriginal Welfare Board, and it was pleasing to note some of the improvements made, especially in housing.

The possible harmful effects of certain insecticides was brought to the notice of personnel in the Department of Agriculture and in Councils' employ. The Commonwealth Health Laboratory at Tamworth agreed to carry out the necessary blood cholinesterase tests in this connection. A curb should be imposed on the indiscriminate and careless use of harmful insecticides in agricultural pursuits, of which there is much evidence.

Many problems still exist—purity and safety of water supplies; conditions at refuse, nightsoil and sewage treatment works; hygienic conditions at hotels; substandard housing. A number of Hospitals and Maternity Units were inspected and improvements suggested.

The Education Department has made substantial progress in converting pan systems to septic tanks at many schools. The ponding and lagooning of sewage in this Health District merits consideration.

PURE FOOD ADMINISTRATION

Pure Food, Inspections, Notices, Samples and Prosecutions

Food premises inspected	1,062
notices issued	138
Samples taken—meat and smallgoods	169
milk and cream	160
spirits tested	416
spirits analysed	4
other	37
Seizures—foodstuffs	1,928 lbs.
Prosecutions	57
Fines: £352, Costs: £46.	

A great deal still needs to be done to secure the wholesomeness and purity of food, and to educate food-handlers and traders in this Health District. Some confusion exists in border towns where the sale of foodstuffs is subject to laws that differ from State to State.
The Chief Food Inspector paid a visit to Tamworth.

PERSONAL HEALTH SERVICES

TABLE I—COMMUNICABLE DISEASES NOTIFIED

Disease	1962		1963	
	Cases	Deaths	Cases	Deaths
Ascariasis	1	..	3	..
Brucellosis	2	..	1	..
Infantile Diarrhoea	7	2	10	5
Virus Encephalitis	3	1	4	2
Infectious Hepatitis	34	..	67	..
Scarlet Fever	3	..	..	..
Puerperal Fever	3	..	..	..
Meningococcal Infection	3	1	1	..
Staphylococcal Pneumonia	3	1	2	2
Poliomyelitis .. .. .	..	..	..	..
Tuberculosis	10	6	41	4
Total	69	11	129	13

A small outbreak of gastro-enteritis at the Caroonna Aboriginal Reserve was promptly and successfully dealt with.
The incidence of infectious hepatitis is still high and this disease may be regarded as a sanitary index in many respects. Small outbreaks of measles and scarlet fever occurred sporadically. Food-poisoning affected one large hospital and an hotel due to poor kitchen hygiene. It is considered that many cases of notifiable diseases are not reported by doctors for various reasons. A single simple notification form might improve matters.

TUBERCULOSIS, 1963

The control of tuberculosis is conducted from two main clinics and three sub-clinics in the District, with an attendance of 3,055. The incidence of notified tuberculosis was 0.42 per 1,000 of population, as compared to 0.98 for Sydney and 0.34 for New South Wales. The increase in new cases was due to the periodical visit by the Mobile X-Ray Units; greater interest by doctors; and more intensive follow-up work and investigations by the clinic personnel.

TABLE II—SCHOOL MEDICAL SERVICE

Type	Number of Schools	Examina-tions	Reviews	Parent Interviews
*Full-time service	49	3,668	1,204	223
Shire Schemes	38	1,399	1,154	23
Totals	87	5,067	2,358	246

* Commenced in April, 1963.

Existing services are being maintained and demands for new services are being met because of the presence of the full-time School Medical Officer.

MATERNAL AND BABY WELFARE

These services were decentralized in September, 1963. There are eighteen Baby Health Centres in this District but at least six more are needed and the Councils concerned have been notified accordingly. Attendances are good, on the whole, but it is usually those who need these services most who fail to come or who do not attend regularly. Home-visiting and health education may help to improve attendances.

PRIVATE HOSPITALS AND REST HOMES

There are four Private Hospitals and two Rest Homes in this Health District. They have now all been visited and inspected and found to be satisfactory in most respects.

NURSES REGISTRATION

Since September 1963, nine training hospitals and seventeen maternity units have been visited.

VACCINATION MEASURES

Councils have made a bid to hold more clinics, including tetanus clinics, but attendances could be better. The records kept by Councils are fairly good but do not readily lend themselves to statistical analyses, and require a great deal of clerical work. Records are not always complete because of injections given by private doctors that do not come to the notice of Councils.

DENTAL SERVICES

A comprehensive dental survey of the schoolchildren in Tamworth was conducted by a team from the School of Preventive Dentistry of the University of Sydney. The results are awaited. This investigation antedated the fluoridation of Tamworth's water supplies in November, 1963. Many other Councils have now deferred their decisions on fluoridation except in Tenterfield where a referendum went against fluoridation. The fluoridation of water supplies is a problem in some of the smaller towns where water supplies are not available to the public.

The Director of Dental Services paid a visit to Tamworth.

MEDICAL EXAMINATION OF CANDIDATES FOR THE PUBLIC SERVICE

Thirty-six candidates were examined for the Public Service.

HEALTH EDUCATION

Numerous press and radio news releases were made; talks were given and articles published in terms of local conditions and circumstances. Visits were made to nine Councils to address them on local health problems and needs. Conferences of Health Inspectors were held in Armidale and Inverell. The Department is taking a keen interest in the work of local voluntary bodies who are directly or indirectly concerned with health, and even stimulating the formation of new ones, where indicated.

The majority of Local Government Bodies have now come to understand the purpose of and reasons for the presence of the Department in this District, and making good use of the services extended to them.

PUBLICATIONS AND SUGGESTIONS

A paper entitled "Q Fever Among Abattoir Workers in New South Wales" was published in the *Australian Medical Journal* by Dr. J. Henson in association with Dr. D. Hansman and Mr. A. M. Murphy of the Institute of Clinical Pathology and Medical Research, Lidcombe.

A suggestion was submitted for an improved depth sampler for testing water.

Broken Hill Health District—Annual Report, 1963

STAFF

Medical Officer of Health—Dr. T. J. CULLEN.

One radiographer and clerical assistants.

VITAL STATISTICS, 1963

Population—The population of the Municipality at 30th June, 1963, was 30,100.

Live Births—There were 635 live births in the district, equivalent to a rate of 21.10 per 1,000 of population. Of these 348 were males and 287 females.

Deaths—Deaths numbered 254, equivalent to a rate of 8.44 per 1,000 of population. Of these 151 were males and 103 females.

Infantile Mortality—Deaths under one year of age numbered 14, equivalent to a rate of 22.05 per 1,000 live births.

Of the total number of deaths of infants under one year of age 10 or 71.43 per cent occurred within one week of birth, and 12 or 85.71 per cent within the first month. The corresponding rates per 1,000 live births for the two age groups were 15.75 and 18.90 respectively.

Stillbirths—There were 11 stillbirths in the district, equal to a rate of 0.37 per 1,000 of the population and representing 1.70 per cent of all births (live and still).

COMMUNICABLE DISEASES

Disease								1962		1963	
								Cases	Deaths	Cases	Deaths
Infantile Diarrhoea	..	..	..	..	..	..	..	..	..	1	1
Infectious Hepatitis	..	..	..	..	..	..	..	..	..	9	..
Scarlet Fever	..	..	..	..	..	..	..	10	..	..	..
Tuberculosis	..	..	..	..	..	..	..	12	..	11	1
Puerperal Fever	..	..	..	..	..	..	..	1	1	..	..
Total	..	..	..	..	..	..	..	23	1	21	2

GENERAL

Fluoridation

This has been given special attention, and although unanimously recommended by the Broken Hill City Council to the Water Board the Board has refused to fluoridate the water supply.

Lectures

A visit by Dr. Allen Lilley, Director of the New South Wales Cancer Foundation was made. Lectures were given and received good support.

Periodically lectures have been given to several groups of nurses on Public Health matters.

Rehabilitation

A committee has been appointed to do preliminary work regarding the establishment of a Rehabilitation Centre in Broken Hill.

Examinations and Visits

Examinations and interviews as Medical Officer of Health	80
Post Mortem Examinations at the request of the Coroner	..	..	34
Attendances at Court and giving evidence in Police cases	..	..	45
Examinations of arrested persons or prisoners	..	..	24
Visits to gaol for examination of prisoners	..	..	20
Government Examinations	..	..	151

SCHOOL MEDICAL SERVICE

Examination of all school children in Broken Hill was in progress under the supervision of the Division of School Medical Service. The co-operation of the local practitioners has been procured and this scheme has been in operation since April, 1963. At this stage approximately 25 per cent of the school children have been examined. Schools visited numbered 16 and 1,600 school children were examined.

TUBERCULOSIS

An x-ray unit of the 70 m.m. type is to be installed this year in the Out-patients Department of the Broken Hill and District Hospital and will supply a very definite need as all Out-patients will receive a routine chest X-ray. Patients X-rayed numbered 428.

CLINICAL PATHOLOGY AND MEDICAL RESEARCH

The Institute of Clinical Pathology and Medical Research—Annual Report, 1963

It is now $4\frac{1}{2}$ years since this Institute first began to operate and it has become commonplace to recount in each successive Annual Report a quite phenomenal increase in every phase of our activities. The year under review has been no exception and has, in fact, witnessed an acceleration of the rate of growth in the amount of work carried out by almost every department.

As pointed out in previous Annual Reports, the functions to the Institute fall under the following headings:—

- (a) Provision of a comprehensive Clinical Pathology service.
- (b) The training of Pathologists and Medical Technologists.
- (c) Research.

These activities are discussed in detail below.

A. CLINICAL PATHOLOGY SERVICE

The growing demand for laboratory investigations by medical practitioners in this State reflects not only the increasing complexity of modern medicine, but also a steady improvement in the quality of patient care. This is evidenced by the fact that, aside from the growing demand from specialists and hospitals for the more recondite investigations which are not carried out by other laboratories in Sydney, there is a steady increase in the number of practitioners utilising the service for investigations of a more or less routine nature. This applies particularly to the country districts, and is a cause for some satisfaction, as one of the major reasons commonly advanced for the reluctance of practitioners to settle in country districts is that they are unable to have their patients properly investigated and so cannot practice high quality medicine. There can be little doubt that the facilities for investigation offered by this Institute, coupled with the growing availability of rapid transport, are making a substantial contribution towards removing this objection to country practice, with obvious benefit to medical care throughout the State. The extent to which this already applies is revealed by the list of centres referring specimens to this Institute (Appendix B).

Pathological Anatomy and Histology

The past year has seen a further increase in the number of specimens submitted for histopathological examination. During the year, 10,447 specimens were received and this represents an increase of 5.5 per cent over 1962, as the figures for that year were artificially loaded to the extent of including 547 Exfoliative Cytology specimens, which, before the Department of Exfoliative Cytology began to operate, were listed under Histopathology. A truer indication of the growth in the amount of work is the increase of 29.5 per cent in the number of examinations carried out on the specimens received. A matter for no little satisfaction is that virtually all this work was carried out by staff who have received all their training in Histopathology at this Institute.

The number of post-mortem examinations carried out for the Lidcombe State Hospital has increased from 227 in 1962, to 273 in 1963. This represents over 50 per cent of the deaths in the hospital during the year. This increase is gratifying, as post-mortem work represents one of the most important disciplines for the trainee pathologists and is an essential preliminary to their introduction to diagnostic histopathology.

During the year the accumulation of museum specimens and the collection of a reference library of histological sections for teaching purposes has proceeded satisfactorily.

The number of specimens received for assay of chorionic gonadotrophin (pregnancy diagnosis) was 379, compared with 254 in 1962, an increase of over 49 per cent. This investigation is carried out in the Histopathology Department; the Galli-Mainini technique, using male toads, is employed.

Bacteriology

During the year 15,860 specimens were received for bacteriological examination; the corresponding figure for 1962 was 13,500, so that the increase for the year amounts to close on 20 per cent. As in the past, much of the work relates to antibiotic and drug sensitivity tests on *M. tuberculosis* and other organisms, and although there was a substantial increase in the former, the latter showed for the first time a notable decline. This is doubtless due in large measure to the introduction of the new series of penicillin derivatives, but also, in part, to a rationalisation of the investigations whereby some of the less commonly used antibiotics are now tested only where special indications exist.

The major source of the increase in the number of specimens received is still in the field of tuberculosis bacteriology, but there was also a notable increase in the examination of throat swabs, due to an outbreak of diphtheria. There was a greatly increased number of specimens examined for evidence of brucella infection as part of a survey of abattoir workers carried out in collaboration with the Metropolitan Medical Officer of Health and his staff. The number of specimens of urine received for bacteriological examination rose sharply, as did those for sero-diagnosis of rheumatoid arthritis and rheumatic fever. At the same time, the number of specimens from suspected cases of venereal disease fell sharply.

This Institute has, during the year, consolidated its position as the principle centre for tuberculosis bacteriology in the State. The number of drug sensitivity tests for *Mycobacterium tuberculosis* performed increased from 406 cultures tested in 1962, to 528 in 1963. Cultures of "anonymous" mycobacteria, isolated in this laboratory or submitted for examination from other laboratories, were classified according to Runyon's scheme; most strains were identified as scotochromogens or nonchromogens. The niacin test was found useful as a means of distinguishing isoniazid-resistant strains of *M. tuberculosis* from the unclassified mycobacteria, which are usually resistant to the standard drugs used in the treatment of tuberculosis. Many cultures were inoculated into guinea pigs; isoniazid-resistant strains of *M. tuberculosis* and "anonymous" mycobacteria were alike in producing a local lesion only or none at all. Most "anonymous" strains were found to grow at room temperature on Lowenstein-Jensen's medium. A few showed growth at 42°C; in such cases, fowl inoculation has recently been employed to exclude *Mycobacterium avium*.

Guinea pig inoculation for specimens of gastric aspirate, introduced in May, 1962, was continued for ten months. During this period 139 specimens were examined. As only one positive finding was obtained by guinea pig inoculation which would not have emerged from the other routine tests, it was apparent that the considerable time expended was not justified by the results and the procedure was therefore abandoned.

A new method of processing specimens of sputum, using acetyl cysteine-sodium hydroxide solution to digest and decontaminate the specimen, has recently been developed in the United States. This procedure has been tried in comparison with the conventional method but the preliminary results have not been encouraging and a high contamination rate was experienced. The method has therefore not been adopted.

The demand for the Rose-Waaler test has continued to increase: 521 sera were tested in 1962 and 787 in 1963. Specimens were received from 34 hospitals.

Staphylococci from 27 hospitals were submitted for bacteriophage typing. The laboratory is now in a position to test more cultures than hitherto.

In May 1963, sulphonamide sensitivity tests, with lysod blood agar as the culture medium, were introduced. The cultures usually tested have been enterobacteria isolated from specimens of urine; the majority of strains examined to date have been found to be sulphonamide resistant.

The laboratory now prepares its own sensitivity discs in the case of the most commonly used antibiotics. Not only have these proved more satisfactory than the preparations previously purchased but a considerable economy has been effected.

A method of performing counts of viable bacteria in fresh specimens of urine has been successfully tested—it is now intended to introduce this as a routine procedure where indicated.

Haematology

The number of specimens received for haematological examination rose to 5,695 from the figure of 4,664 recorded in 1962. This represents an increase of 22 per cent. At the same time the number of examinations completed totalled 21,180 compared with 15,291 in 1962, an increase of over 38 per cent. This increase was distributed throughout virtually the whole range of haematological investigations undertaken in the department. Such a volume of work could not have been handled in the original laboratory space allocated to Haematology and the re-arrangement of the accommodation made possible by extensions to the building which were completed in 1962 was of great advantage. Much of the demand for haematological investigations resulted from an increase in acute admissions to the Lidcombe State Hospital, with a consequent emphasis on diagnostic tests. There was also much more major surgery undertaken in the hospital and this augmented demand for blood transfusions. Attention was also directed towards investigation of the nutritional status of newly admitted patients, with particular reference to haematinics. Special problems of iron utilisation in the elderly were also the subject of investigation. All these problems have been encountered in the day-to-day work of providing a full haematological service to the hospital.

Microbiological assay procedures are now fully extended and the rapid increase in the number of requests and the number of referring physicians underlines the popularity of this service, which was not previously available. The fact that a very high proportion of these tests yield positive results indicates that the restraints we are able to impose are effective in restricting the demand to cases in which a genuine indication exists. Although these tests are usually requested for purely diagnostic purposes quite a number of unusual findings have emerged which reveal interesting aspects of folic acid and vitamin B₁₂ metabolism, worthy of further investigation.

During the year urinary formimino glutamic acid determination as an indication of folic acid deficiency and haemoglobin electrophoresis for the detection of thalassaemia minor have been introduced, the latter in collaboration with the Biochemistry Department.

Biochemistry

The work load of this department continues to increase at a greater rate than previously. The total specimens received, 10,010, increased by 16.5 per cent and the number of tests performed, 23,886, by 23 per cent, when compared with the figures for 1962 (8,590 and 19,407 respectively).

At the present rate of increase the number of tests carried out will have almost doubled by 1966 and more than doubled by 1967 by comparison with 1963. The proportion, as well as the number, of complex analyses relative to the total analyses is also increasing, so that the work load is accelerating at a rate greater than the statistics indicate. There is a constantly increasing demand for specialised examinations which are carried out either with difficulty or not at all in other laboratories, including even those at the larger teaching hospitals, and almost 20 per cent of the work now falls into this category.

The most notable increase was in protein-bound iodine determinations, where the demand increased four-fold, while the demand for serum iron and iron-binding capacity almost trebled. Other notable increases were in serum calcium, protein, cholesterol and glutamic oxalacetic and pyruvic transaminase determinations and in urinary steroid and catecholamine estimations.

The previous intensive developmental activity has now abated to some extent. During this period a complete overhaul of existing routine procedures or the initiation of novel ones has been made, with much emphasis placed on reducing to a minimum the working time required for each examination. At the same time, improvements in working accuracy and precision have been effected, while attempts have been made to render each procedure as fool-proof as possible. In this connection, the continuous quality control programme mentioned in last year's report is now established. Further changes are under constant consideration and various types of fully or semi automatic apparatus are being investigated with a view to possible introduction in future. Such equipment makes it possible to cope with a greater work load without increasing staff.

Virology

During the year, 3,390 specimens were received compared with 2,468 in 1962. This relatively large increase is accounted for mainly by the continuing survey for evidence of Q fever in abattoir workers and in cattle slaughtered at Homebush and Newcastle. There has therefore been a relative increase in the volume of serology as compared to the virus isolation work. The major sources of specimens for this latter work continue to be the metropolitan hospitals and general practitioners. During the year, 148 viruses were isolated. There were no major epidemics and no polioviruses were isolated.

A further 17 hyperimmune sera were prepared and antisera have now been prepared against all the viral serotypes in the Echo and Cocksackie B groups.

During the year the Institute accepted the responsibility of acting as a Reference Laboratory for the Echo and Cocksackie A and B viruses. It will therefore be necessary to press forward with the preparation of the Cocksackie A antisera so that we can fulfil our obligations in this regard.

Investigations into the viruses of the common cold group have continued and to date 10 viruses have been isolated. Special tissue cultures of human embryonic kidney and human embryonic fibroblasts are necessary for this work and these cells have not been continuously available. In recent months however, we have been successful in maintaining embryonic fibroblasts in serial cultivation which has allowed a greater continuity in the work. Experience has shown that these are difficult viruses to isolate and work with. They are very labile and propagate poorly in tissue cultures.

As mentioned above, the Q fever survey has continued during the year and sera from abattoir workers in Newcastle, Maitland, Sydney, Goulburn, Wagga Wagga and Cootamundra have been examined. In all, 1,004 human sera and 1,524 cattle sera have been tested.

Work is currently in progress developing methods of haemagglutination and complement fixation for the serological diagnosis of toxoplasma. It is hoped to have these tests working on a routine basis in the near future.

Exfoliative Cytology

Previous Annual Reports recount the preliminary planning of the Department of Exfoliative Cytology, its initial establishment and the first six months of the operation of the Uterine Cancer Detection Project. This report covers the first full year's operation of the Exfoliative Cytology service.

Throughout the year there was a steady increase in the number of cervical smears submitted, the grand total being 37,538. This figure can be regarded as satisfactory considering that many initial difficulties had to be overcome. Of the 37,538 specimens received, 271 revealed cytological abnormalities. Of these 102 were of a minor nature requiring no immediate action other than regular observation, but in the remaining 169, further investigation by biopsy was recommended. So far this has been done in 112 cases. In 17 of these clinical carcinoma was present so the diagnosis was merely confirmed. However, in 95 patients cytological examination revealed cancer which was unsuspected on clinical grounds. All these patients have been treated and their prognosis should be excellent.

Sputa, ascitic and pleural fluids submitted for cytological examination totalled 361. Towards the end of the year the staff was augmented by a registrar and it is now possible to extend this aspect of the work.

During the year a large volume of material was accumulated for teaching purposes and a comprehensive collection of photomicrographs has been built up, so that we are now in a position to offer a complete training in gynaecological cyto-diagnosis.

B. TEACHING

Training of Medical Graduates as Pathologists

While this Institute has for several years enjoyed full recognition by Sydney University as an approved laboratory for the post-graduate training of pathologists, it is only during this year that similar recognition has been sought of the College of Pathologists of Australia. It is gratifying to record that unrestricted approval has been granted. Seven registrars are at present undergoing training in the Institute's laboratories. While the training offered is, for the most part, on the apprenticeship system, the departments of Bacteriology and Haematology conduct in addition rather more formal training programmes. In Histopathology, considerable progress has been made during the year towards the compilation of a reference collection of sections and in building up a museum of gross pathological specimens for teaching purposes. During the year a multiple viewing micro-projector was built in the workshop and this has proved invaluable for instructing registrars in Histopathology. We now conduct regular demonstrations at which all the staff can confer on individual sections.

The tenure of the registrarships is for a period of three years during which time trainees spend a full year doing Morbid Anatomy and Histology and then six months in each of the other departments, namely, Haematology, Bacteriology, and Biochemistry, leaving a further six months for general revision. The post-graduate teaching activities are reinforced by attendance at seminars, scientific meetings, lectures and informal tutorials. During the six months each registrar spends in Haematology he is either in residence or on call for all emergency pathology work at the Lidcombe State Hospital and is in this way able to gain experience in emergency pathology. Plans are at present being made to offer training in Exfoliative Cytology and accordingly a large number of normal and abnormal smears have been collected and photographed for teaching purposes. This department is now in a position not only to offer training to pathologists and gynaecologists but also to train cyto-technicians and scanners for outside bodies.

Training of Laboratory Assistants and Microbiologists

The staff establishment provides for eight laboratory assistants and 13 laboratory assistants-in-training, the purpose of these appointments being to meet future needs for qualified technical staff in the Health Department's laboratories by providing in-service training in all branches of medical laboratory technology. Trainees fall into two categories:—

- (i) Those whose aim it is to be microbiologists—these attend the part-time course at the University of New South Wales leading to the degree of Bachelor of Science in Applied Biology.
- (ii) Those who wish to qualify as laboratory assistants—these attend the laboratory certificate course at the Sydney Technical College and on completion of this course may proceed to a Diploma in Medical Technology.

In addition, to meet the needs of staff for Exfoliative Cytology, 12 positions of trainee scanner were created. The selected applicants were provided with in-service training. They work only in the Exfoliative Cytology department and do not at present obtain any formal qualification.

Staff Meetings

An important feature of the educational side of the work of the Institute is the programme of weekly staff seminars, which are jointly sponsored by the Institute and the Lidcombe State Hospital. These meetings are open to the medical profession as a whole and are advertised in the *Medical Journal of Australia*, in the British Medical Association's Monthly Bulletin and by the Post-Graduate Committee in Medicine of the University of Sydney. Approximately 36 such meetings are held each year, spread over three terms, in each of which 12 seminars take place; there is a recess of approximately one month between terms. All members of the scientific staff are encouraged to attend and the senior staff, registrars and microbiologists are expected to take turns at presenting papers; outside speakers are also invited to lecture. Apart from the fact that these seminars provide a common ground on which the staffs of the Institute and the Lidcombe State Hospital can meet, much valuable clinical, pathological and scientific information is disseminated. One of the most important aspects however, is the opportunity these seminars afford for the members of the staff to gain practical experience in lecturing before a critical audience. The programme of weekly seminars held during 1962 is attached (see appendix C).

The results of the training programmes at the various levels discussed above give cause for considerable satisfaction. The Institute, when first established had, apart from the specialist heads of departments, a nucleus of but six science graduates experienced in medical technology and two histological technicians; the scientific and technical staff (which includes trainees) now exceeds 50, most of whom have obtained all their training here. When the Institute of Clinical Pathology and Medical Research was established, misgivings were frequently expressed that its staffing would drain many trained personnel away from hospital laboratories; it is significant that no hospital in New South Wales has lost a single member of its trained staff to this Institute.

During the year the first four registrars completed their training schedules. Of these, one was appointed to a vacancy in the Division of Forensic Medicine while the remaining three are to be taken on to our permanent staff in the grade of Medical Officer; of these one will reinforce the staff of the Histopathology Department while the other two intend undergoing further specialist training, one in Exfoliative Cytology and the other in Virology.

There is little doubt that the training programmes will pay rich dividends in the next few years as more trained and experienced staff become necessary to handle the ever-increasing work load of this Institute and to staff other laboratories within the New South Wales Department of Public Health.

C. RESEARCH

Programmes of original work are being developed in the various departments. Much of this is of a developmental nature, aimed at overcoming technical difficulties inherent in some of the more sophisticated types of investigation; some involve epidemiological or other types of survey, while a small residue is rather more fundamental in nature.

Biochemistry

The main effort this year has been the continuation of studies of urinary steroid hormone metabolites as an aid in the diagnosis of various endocrine dysfunctions. Gas chromatographic techniques are being developed as the analytical tool. A considerable amount of work has been undertaken to develop techniques for the extraction of various types of steroid metabolites from urine. These involve the exploration of enzymatic, hydrolytic and solvolytic procedures for liberating the free steroids excreted as their water-soluble conjugates. Satisfactory extraction is now possible for some types of hormone metabolites, but not for others.

Urinary pregnanediol, the main metabolite of progesterone, is an important measure of progestational activity in women. Existing methods are slow and relatively non-specific. They are virtually useless for the low urinary levels found in non-pregnant or post-menopausal women. By means of a relatively simple and rapid hydrolytic and extraction procedure, followed by gas chromatographic analysis of the acetylated extract, we have found it possible to determine accurately quantities of urinary pregnanediol as low as 0.1 μ g., thus enabling non-pregnancy and early pregnancy urines to be dealt with. Quantitative changes throughout the menstrual cycle can be followed and the technique has been used in following cases of habitual and threatened abortion thereby aiding the physician in instituting and controlling therapy.

Another aspect of gas chromatography being studied is the development of chromatographic columns, since each particular problem generally needs a special type of column for effective elution and separation of the steroids of interest.

A particularly difficult group of metabolites are those from cortisol-and cortisone-like adrenal hormones, and while it has been possible to elute some of those highly polar compounds, no completely satisfactory way has yet been found for dealing directly with this important group. Another means of attack on this problem being pursued with apparently better promise involves conversion of these corticoid metabolites to 17-ketosteroid derivatives by chemical oxidative procedures. Fortunately we have been able to devise various columns which will give satisfactory separations of most of the main 17-ketosteroids and since with a few exceptions each corticoid gives rise after suitable oxidation to a different derivative, an analytical scheme for urinary analysis may eventually be possible. A long-term programme of investigation of these problems is envisaged. As far as we are aware, our Institute continues to be the only one in New South Wales engaged on investigations of endocrine function by techniques involving vapour phase chromatography. Such techniques, it is to be hoped, will augment or even supplant the usually used paper chromatography methods which, although elegant, are laborious and time-consuming and hardly applicable to practical clinical investigations of endocrine disease.

Haematology

The investigation of the nutritional status of aged males with particular reference to haematinics has continued during the year and this has been extended to include urinary formimino glutamic estimations as an index of folic acid deficiency. A considerable amount of work was devoted to developing and standardising these techniques. Work is at present progressing in an attempt to establish a method for the assay of intrinsic factor and to develop techniques for the determination of auto-antibodies to gastric mucosa. Once these are successfully completed we shall be in a position to conduct very thorough investigations of the microcytic anaemias.

Bacteriology

As mentioned elsewhere, the Bacteriology Department has collaborated with the Virology Department and the Metropolitan Medical Officer of Health and his staff, as well as the veterinary officers of the Department of Agriculture, in a survey of infections to which abattoir workers are occupationally exposed. In this connection the Bacteriology Department is principally concerned with brucellosis.

Work on the anonymous mycobacteria is also in hand and strains of tetracycline resistant pneumococci are being investigated.

Histopathology

The work on the aging of elastic tissue referred to in previous annual reports was completed to the stage of publication of the preliminary findings, but because of the difficulty experienced in obtaining comparable material from younger age groups this work has now been shelved. The difficulty springs largely from the fact that such material is not available from the Lidcombe State Hospital and attempts to obtain suitable specimens from other sources have met with very limited success.

Work has meanwhile proceeded on the histochemistry of mucins. Techniques of immuno-histochemistry with particular reference to fluorescence microscopy have recently been under investigation. It is hoped that these techniques, once established, will also be utilised for investigational work on auto-immune disease in collaboration with the Haematology Department.

We are also attempting to adapt fluorescent labelled antibody methods to hasten the serotyping of certain viruses.

Virology

The previous annual report mentioned arrangements which were being made for the collection of specimens at the Medical Examinations Centre in George Street as one of several approaches to an epidemiological survey of respiratory virus infections. A circular was sent to a number of Public Service Departments inviting officers suffering from upper respiratory tract infections to report at this centre so that specimens could be collected. Unfortunately, this scheme has had only very limited success, largely, no doubt, because of the distance of this clinic from the main Departments. It is regrettable that arrangements for the collection of specimens at the Royal Alexandra Hospital for Children, from children suffering from acute respiratory infections, has also had only limited success. The major factor here has been the difficulty in maintaining continuity with frequently changing resident medical and nursing staff.

We are very anxious to proceed with the investigation of the common cold viruses and several new sources of specimens are at present being explored in the hope that this programme can proceed more rapidly during the coming winter. Already 10 strains of rhinovirus (common cold virus) have been isolated and to the best of our knowledge the Virology Department of this Institute is the only centre in Australia where work on these viruses is being actively pursued.

A survey of enterovirus infections in infants has proceeded satisfactorily and several isolations of a hitherto undescribed virus have been made. This agent has been the subject of a detailed study, the results of which have been submitted for publication. An outbreak of infections with poliovirus in an Infants' Home was also the subject of study and this too, has been submitted for publication.

The Virology Department has investigated the incidence of Q Fever infections in abattoir workers as part of the survey mentioned above and, in collaboration with the Department of Agriculture, is investigating the incidence of this infection in cattle.

GENERAL

Administration

The broad administrative structure of the Institute described in previous reports has continued to function satisfactorily despite the heavy increase in work attributable not only to the increased demand for our services but also because of the great increase in staff which has taken place over the past two years. The essence of the system is speed in the despatch of reports and in answering telephone enquiries relating to investigations. Conservation of the time of scientific and technical officers has been achieved by delegating as much of the written work as possible to clerical staff, while the introduction of dictating machines has relieved an enormous burden of written work in the Histopathology Department.

Plans are at present in hand for the microfilming of records as this will achieve not only considerable economy of space but will also greatly facilitate and speed reference to results of previous tests, which are often highly relevant to investigations in progress.

Photography

Although still without the services of a photographer we have managed to proceed with the work of building up a collection of photomicrographs for teaching purposes in Exfoliative Cytology, Haematology and, to a lesser extent, in Histopathology, as several members of the senior staff have taken the trouble to acquire the necessary competence to carry out the work themselves. We have been fortunate in obtaining assistance from one of the medical officers of the Lidcombe State Hospital who is a very experienced photographer and with his help an instructional film "A Smear in Time" has been produced for promoting uterine cancer detection work among the medical profession.

Workshop

During the year a new Scientific Instrument Maker was appointed and we are at last able to realise the full potential of the workshop. This is most gratifying, as a number of most useful pieces of equipment have been constructed. Of particular value is a multiple-viewing microscope which has greatly facilitated the training of pathologists in Histopathology. Other major equipment produced includes a large capacity roller-tube apparatus for Virology and we are currently working on the development of a freezing microtome of advanced design.

An equally important function of the workshop is the maintenance of existing equipment in a serviceable condition.

Library

The library continues to be a most important feature of the Institute although a certain amount of difficulty has been experienced in maintaining the desired rate of acquisitions during the year. The importance of an adequate library in an Institute of this sort cannot be overstressed, particularly in view of our remoteness from the city and University libraries, which renders rapid reference to essential information difficult.

Animal House

The animal house has had to meet very heavy demands during the year. Work on the Cocksackie viruses has required a constant supply of new-born mice so that it has been necessary to organise a breeding programme to produce several litters each day. Large numbers of guinea pigs are used for tuberculosis bacteriology, while rabbits are in constant demand for the production of specific viral antisera for diagnostic purposes.

CONCLUSION

This year has been one in which there has been an all-round expansion in the activities of the Institute of Clinical Pathology and Medical Research. There has been a conspicuous increase in the volume of work done in all departments and at the same time there has been a qualitative increase as well, in that the variety of investigations offered has been steadily broadened. Many of the investigations now undertaken at the Institute were not previously available in New South Wales, or, if they were available, were restricted to patients attending at a few specialised hospitals. That they are now generally available to the entire population must add materially to the quality of medical practice in this State.

The coming year will see yet another development in that we shall very soon incorporate the Serology Department, which at present still operates at 93 Macquarie Street. Extension of the laboratory accommodation to house this Department are at present almost complete. Apart from carrying out routine venereal disease serological examinations this department is to become the reference laboratory for *Treponema pallidum* immobilization tests serving the whole of Australia. With the addition of this department to the existing facilities the Institute will be able to offer a virtually complete Clinical Pathology service.

It is a pleasure to pay tribute to all members of the staff of the Institute. They have always reacted with enthusiasm to any proposals aimed at improving the output and quality of work, and it is to this spirit that the results achieved to date are attributable. That it has been possible to encourage and maintain this enthusiasm is due in no small measure to the co-operation and support which we have enjoyed from the central administration of the New South Wales Department of Public Health and other Government Departments, notably the Public Service Board, the Government Stores Department and the Department of Public Works. A happy relationship exists with the Lidcombe State Hospital and also with the many hospitals and medical practitioners served by the Institute, and so long as this can be maintained all members of the staff should continue to find the work congenial and rewarding.

APPENDIX A

THE INSTITUTE OF CLINICAL PATHOLOGY AND MEDICAL RESEARCH
 STATISTICAL SUMMARY OF SPECIMENS RECEIVED AND EXAMINATIONS COMPLETED—1ST JANUARY, 1963—

31ST DECEMBER, 1963

Histopathology

	1962	1963
Number of specimens—		
Surgical biopsy	9,413	9,824
Exfoliative cytology	547	..
Post-mortems (internal)	222	273
Post-mortems (external)	93	201
Miscellaneous	150	149
	<hr/> 10,425*	<hr/> 10,447
Examinations completed—		
Paraffin sections	21,412	27,844
Frozen sections	101	67
Exfoliative cytology smears	1,020	..
Miscellaneous	150	149
	<hr/> 22,683*	<hr/> 28,060

* The figures for 1962 include exfoliative cytology specimens which are now examined in the Department of Exfoliative Cytology.

Chorionic Gonadotrophin Assay (Galli-Mainini)	254	379
---	-----	-----

Haematology

Number of specimens	4,665	5,695
Examinations completed—		
Haemoglobin	3,360	4,074
Haematocrit	2,505	3,679
Red cell count	41	35
Reticulocytes	122	178
White cell count	1,384	2,332
Differential white cell count	1,029	1,938
Eosinophil count	47	12
Platelet count	177	197
Examination of blood film	3,448	4,145
Malaria	8	6
Blood sedimentation rate (E.S.R.)	1,207	1,499
L.E. cells.. .. .	57	76
Prothrombin time	161	198
Examination of blood film for lead	5	..
Group and Rh factor	361	378
Cross-matching	188	501
Bone marrow examination	53	68
Bleeding and clotting times	18	17
Investigation of haemostatic defects	9	8
Serum vitamin B ₁₂	579	836
Serum folic acid	171	398
Blood volume } Radio-isotope	5	5
Red cell survival } tracer method	6	1
Schilling test	18	25
Coomb's test	99	272
Red cell fragility	4	3
Paul-Bunnell reaction	209	245
Haemoglobin electrophoresis .. .. .	..	13
Miscellaneous	20	41
	<hr/> 15,291	<hr/> 21,180

Bacteriology

	1962	1963
Number of specimens	13,300	15,860
Examinations completed—		
Antibiotic sensitivity tests	15,224	12,720
Blood culture	33	32
Cerebrospinal fluid cell count	61	63
Cerebrospinal fluid culture	4	5
Dark-ground preparation, spirochaetes	7	2
<i>Escherichia coli</i> , serotype identification	428	198
Faeces, microscopic examination	114	101
Faeces, culture	943	807
Guinea pig inoculation, <i>M. tuberculosis</i> (other than milk)	303	535
Haemolytic streptococci, Lancefield grouping	116	117
Milk, guinea pig inoculation, <i>M. tuberculosis</i>	115	83
Milk, guinea pig inoculation, <i>B. abortus</i>	115	97
Nasal smears, <i>Mycobacterium leprae</i>	36	53
Nasal swabs, culture	246	109
Pus, Gram's stain	517	493
Pus, culture	517	504
Culture, identification	378	133
Skin, hair and nail, direct examination	145	98
Skin, hair and nail, culture for fungi	122	81
Sensitivity tests, <i>M. tuberculosis</i>	1,775	2,049
Sputum, Gram's stain	432	482
Sputum, culture	432	482
Sputum, Ziehl-Neelsen stain	2,428	3,458
Sputum, culture	2,428	3,455
<i>Staphylococcus aureus</i> , bacteriophage typing	474	420
Sterility tests	2	12
Throat swab culture	889	1,764
Urethral smears, Gram's stain	1,835	1,400
Cervical smears, Gram's stain	1,223	621
Urine, chemical examination	1,525	1,837
Urine, microscopic examination	1,525	1,833
Urine, Gram's stain	670	634
Urine, culture	670	635
Vaccines	34	13
Vaginal discharge, <i>Candida albicans</i>	47	26
Vaginal discharge, Trichomonads	16	10
Miscellaneous bacteriology	12	20
Brucella agglutination test	225	1,258
C-reactive protein test	20	29
Rose-Waaler test	521	787
Weil-Felix reaction	40	26
Widal reaction	97	65
Anti streptolysin O titre	240	391
Casoni test	9	3
Mantoux test	133	180
	<hr/> 37,126	<hr/> 38,121

								1962	1963
Number of specimens	..	..	..	..	..	..	..	8,590	10,010
Examinations completed—									
C.S.F. for—									
chloride	..	..	..	..	..	..	..	71	77
colloidal mastic reaction	..	..	..	..	..	..	..	941	732
globulin	..	..	..	..	..	..	..	66	50
glucose	..	..	..	..	..	..	..	54	69
protein	..	..	..	..	..	..	..	90	98
Blood and Serum for—									
acid phosphatase	..	..	..	..	..	..	..	287	359
alkaline phosphatase	..	..	..	..	..	..	..	1,084	1,209
amylase	..	..	..	..	..	..	..	71	60
bilirubin	..	..	..	..	..	..	..	970	1,079
bromide	..	..	..	..	..	..	..	56	36
calcium	..	..	..	..	..	..	..	177	353
carbon dioxide combining power	..	..	..	..	..	..	..	259	341
chloride	..	..	..	..	..	..	..	959	1,246
cholesterol	..	..	..	..	..	..	..	267	490
creatine	..	..	..	..	..	..	..	6	1
creatinine	..	..	..	..	..	..	..	61	43
glucose	..	..	..	..	..	..	..	374	463
glucose tolerance	..	..	..	..	..	..	..	61	63
glutamic pyruvic transaminase	..	..	..	..	..	..	..	359	472
glutamic oxalacetic transaminase	..	..	..	..	..	..	..	333	480
iron ..	..	..	..	..	..	..	..	187	487
iron binding capacity	..	..	..	..	..	..	..	187	477
methaemoglobin	..	..	..	..	..	..	..	4	3
phosphate (inorganic)	..	..	..	..	..	..	..	115	178
potassium	..	..	..	..	..	..	..	975	1,259
proteins—									
total	..	..	..	..	..	..	..	1,375	1,943
albumin	..	..	..	..	..	..	..	894	874
globulin	..	..	..	..	..	..	..	908	873
electrophoresis	..	..	..	..	..	..	..	550	1,107
protein-bound iodine	..	..	..	..	..	..	..	51	216
sodium	..	..	..	..	..	..	..	972	1,281
sulphaemoglobin	..	..	..	..	..	..	..	2	2
urea	..	..	..	..	..	..	..	2,289	2,211
uric acid	..	..	..	..	..	..	..	392	385
zinc turbidity	..	..	..	..	..	..	..	883	1,019
Faeces for fats	..	..	..	..	..	..	..	252	253
occult blood	..	..	..	..	..	..	..	281	367
tryptic activity	..	..	..	..	..	..	..	7	1
Gastric fluid for general analysis	..	..	..	..	..	..	..	77	38
Urine for bilirubin	..	..	..	..	..	..	..	10	8
diastase	..	..	..	..	..	..	..	1	..
catecholamines	..	..	..	..	..	..	..	355	473
17-ketogenic steroids	..	..	..	..	..	..	..	409	536
17-ketosteroids	..	..	..	..	..	..	..	528	710
urea	..	..	..	..	..	..	..	144	70
Calculi for analysis	..	..	..	..	..	..	..	58	63
Miscellaneous chemical examination	..	..	..	..	..	..	..	955	1,331
								19,407	23,886

Virology

								1962	1963
A. Specimens for virus isolation—									
(1) Faeces	..	..	..	..	..	..	..	881	497
(2) Throat washings	..	..	..	..	..	..	..	72	54
(3) Cerebrospinal fluid	..	..	..	..	..	..	..	93	79
(4) Miscellaneous	..	..	..	..	..	..	..	91	188
B. Blood for antibody estimations—									
Complement fixation tests	..	..	..	..	..	..	..	357	2,691
Neutralisation tests	..	..	..	..	..	..	..	239	149
								1,733	3,658
Examinations completed—									
Virus isolation and identification investigations	..	..	..	..	..	..	..	*	2,264
Complement Fixation Tests	..	..	..	..	..	..	..	*	2,717
Neutralisation Tests—									
Polio	..	..	..	..	..	..	..	*	66
Coxsackie	..	..	..	..	..	..	..	..	233
E.C.H.O.	..	..	..	..	..	..	..	..	2
Adenovirus	..	..	..	..	..	..	..	..	4
Influenza	..	..	..	..	..	..	..	..	4
								4,418	5,290

* This system of classifying tests was not introduced until 1963, consequently the corresponding figures for 1962 are not available.

Exfoliative Cytology

Number of smears examined—

Gynaecological	..	..	..	..	..	..	..	15,504	37,515
General	..	..	..	..	..	..	..	176	361
								15,680	37,876

Total Number of Investigations Completed

								1962	1963
Histopathology	..	..	..	..	..	..	..	22,683	28,060
Chorionic Gonadotrophin Assay	..	..	..	..	..	..	..	254	379
Haematology	..	..	..	..	..	..	..	15,291	21,180
Biochemistry	..	..	..	..	..	..	..	19,407	23,886
Bacteriology	..	..	..	..	..	..	..	37,126	38,121
Virology	..	..	..	..	..	..	..	4,418	5,290
Exfoliative Cytology	..	..	..	..	..	..	..	15,680	37,876
								114,859	154,792

APPENDIX B

THE INSTITUTE OF CLINICAL PATHOLOGY AND MEDICAL RESEARCH

SOURCES OF SPECIMENS RECEIVED

State Government Departments and Instrumentalities—

Department of Child Welfare and Social Welfare.

Department of Agriculture (Veterinary Research Station, Glenfield).

Prisons Department.

State Cancer Council.

Department of Railways.

Milk Board.

Joint Coal Board.

Water Board.

Other Branches of N.S.W. Department of Public Health—

- Medical Examination Centre.
- Hospitals Admission Depot.
- Tuberculosis Division.
- Division of Epidemiology.
- Division of Maternal and Baby Welfare.
- School Medical Service.
- Metropolitan and District Medical Officers of Health (includes surveys of State Abattoirs, etc.).
- All State and Mental Hospitals.
- Government Analyst's Branch.
- Medico-Legal Laboratory.

Commonwealth Government Departments—

- Department of Health—
 - School of Public Health and Tropical Medicine.
 - Commonwealth Health Laboratories.
 - Department of Health, Canberra.
 - Department of Health, New Guinea.
- Department of Repatriation.
- Department of Navy.
- Department of Army.
- Department of Air.
- Department of Territories—
 - Government Medical Officer, Norfolk Island.

Other Bodies—

- Infants' Home, Ashfield.
- Northcott Neurological Centre.
- Anti-Tuberculosis Association of N.S.W.
- Albury City Council.
- Queen Elizabeth II Research Institute, Sydney University.

Metropolitan Hospitals—

- | | |
|-------------------------------------|--|
| Auburn District. | Royal Alexandra for Children. |
| Balmain District. | Royal North Shore. |
| Bankstown District. | Royal North Shore, Institute of Medical Research. |
| Benevolent Society of N.S.W.— | |
| Renwick for Infants. | Royal Prince Alfred. |
| Royal for Women. | Royal South Sydney. |
| Bodington Sanatorium. | Ryde District Soldiers' Memorial. |
| Braeside Church of England. | St. George, Kogarah. |
| Canterbury District Memorial. | St. Joseph's, Auburn. |
| Eastern Suburbs. | St. Luke's, Darlinghurst. |
| Fairfield District. | St. Margaret's for Women, Sydney. |
| Hornsby and District. | St. Vincent's, Darlinghurst. |
| Lady Davidson Home, Turramurra. | Sutherland Shire District. |
| Lewisham. | Sydney. |
| Liverpool District. | Sydney Homoeopathic. |
| Lottie Stewart. | Sydney, Kanematsu Memorial Institute of Pathology. |
| Lourdes, Killara. | Sydney, Prince of Wales Division, Randwick. |
| Manly District. | Sydney Sanitarium and Hospital, Wahroonga |
| Marrickville District. | United Dental. |
| Masonic, Ashfield. | War Memorial, Waverley. |
| Mater Misericordiae (North Sydney). | Western Suburbs. |
| Parramatta District. | Women's (Crown Street). |
| Prince Henry. | |
| Princess Juliana, Turramurra. | |
| Queen Victoria, Annandale. | |
| Rachel Forster. | |

Country Hospitals—

Adelong.
 Albury Base.
 Armidale and New England.
 Bathurst District.
 Batlow.
 Bega District.
 Bellinger River District.
 Berrima District, Bowral.
 Blayney District.
 Blue Mountains District Anzac Memorial.
 Bombala District.
 Bourke District.
 Braidwood District.
 Brentwood, Muswellbrook.
 Brewarrina District.
 Broken Hill and District.
 Bulli.
 Camden District.
 Canowindra Soldiers Memorial.
 Carcoar District.
 Cessnock District.
 Cobar District.
 Coff's Harbour and District.
 Coledale District.
 Collarenebri District.
 Condobolin District.
 Coolah District.
 Cooma District.
 Coonabarabran District.
 Coonamble District.
 Cootamundra District.
 Corowa.
 Cowra District.
 Crookwell District.
 David Berry Hospital, Berry.
 Delegate Cottage.
 Deniliquin.
 Dorriggo.
 Dubbo Base.
 Dunedoo War Memorial.
 Dungog and District.
 Forbes District.
 Gilgandra District.
 Glen Innes District.
 Goodooga District.
 Gosford District.
 Goulburn Base.
 Grafton Base.
 Grenfell District.
 Griffith District.
 Gulgong District.
 Gundagai District.
 Guyra District War Memorial.
 Hawkesbury Benevolent Society and Hospital, Windsor.
 Hay.
 Hillston.
 Inverell District.
 Junee District.
 Kiama District.

Kurri Kurri District.
 Lake Cargelligo District.
 Leeton District.
 Lithgow District.
 Lockhart and District.
 McCaughey Memorial, Urana.
 Macksville District.
 Maclean (Lower Clarence).
 Macleay District, Kempsey.
 Maitland.
 Manning River District.
 Mater Misericordiae (Waratah).
 Mercy, Albury.
 Merriwa District.
 Milton and Ulladulla.
 Molong District.
 Moree District.
 Mudgee District.
 Murrumburrah-Harden District.
 Narrabri District.
 Narrandera District.
 Narromine District.
 Nepean District, Penrith.
 Nyngan District.
 Orange Base.
 Pambula District.
 Parkes District.
 Peak Hill and District.
 Portland District.
 Queen Victoria and Picton Lakes Homes.
 Royal Newcastle.
 Rylstone District.
 Sacred Heart and St. Catherine's, Cootamundra.
 Sacred Heart (Young).
 St. John of God (Goulburn).
 Scott Memorial, Scone.
 Shoalhaven District Memorial.
 Singleton District.
 Tamworth Base.
 Temora and District.
 Trundle-Bogan Gate Community.
 Tullamore District.
 Tullibigeal Bush Nursing Centre.
 Tumbarumba District.
 Tweed District, Murwillumbah.
 Ungarie District.
 Wagga Wagga Base.
 Walgett District.
 Wallsend District.
 Warren District.
 Wauchope District Memorial.
 Wee Waa District.
 Wellington District.
 Wilcannia and District.
 Wilson Memorial, Murrurundi.
 Wollongong District.
 Wyalong and District.
 Yeoval.
 Young District.

Specimens are also received from over 2,000 medical practitioners in private practice throughout the State.

APPENDIX C
THE INSTITUTE OF CLINICAL PATHOLOGY AND MEDICAL RESEARCH
WEEKLY SEMINARS HELD DURING 1963
(IN CONJUNCTION WITH THE LIDCOMBE STATE HOSPITAL AND HOME)

Date	Subject and Speaker
4th February, 1963.	"Soap and the Skin" (Dr. E. Kocsard, Hon. Dermatologist, Lidcombe State Hospital).
11th February, 1963.	"Epilepsy in the Melting Pot" (Dr. David Bell, Cerebral Surgery and Research Unit, Callan Park Mental Hospital).
18th February, 1963.	"The Physiology of Dyspnoea" (Dr. T. O'Connell, Lidcombe State Hospital).
25th February, 1963.	"Anaesthesia in the Aged" (Dr. G. Kellerman, Lidcombe State Hospital).
11th March, 1963.	"The Surgery of Cerebrovascular Disorders" (Dr. Alexander Gonski, The Prince Henry Hospital).
	"Hyperthyroidism" A Symposium.
	1. Clinical Aspects (Dr. G. Andrews, Lidcombe State Hospital.)
	2. Biochemistry (Dr. P. A. Harden, Institute of Clinical Pathology and Medical Research).
	3. Pathology (Dr. R. Reid, Institute of Clinical Pathology and Medical Research).
18th March, 1963.	Paget's Disease A Symposium,
	1. Clinical and Radiological Features (Dr. S. Shulman, Lidcombe State Hospital).
	2. Biochemistry (Mr. D. Bass, Institute of Clinical Pathology and Medical Research).
	3. Pathology (Dr. T. J. Gaha, Institute of Clinical Pathology and Medical Research).
25th March, 1963.	"A Survey of Coronary Angiography (Dr. G. Michell, St. Vincent's Hospital).
1st April, 1963.	"Ten-minute Reviews of Recent Literature".
	1. Microbiology (Dr. T. Turner, Institute of Clinical Pathology and Medical Research).
	2. Pathology (Dr. J. C. Booth, Institute of Clinical Pathology and Medical Research).
	3. Internal Medicine (Dr. N. Fink, Lidcombe State Hospital).
	4. Surgery (Dr. J. Moulton, Lidcombe State Hospital).
8th April, 1963.	"Bacteriology of Urinary Tract Infections" (Dr. D. Hansman, Institute of Clinical Pathology and Medical Research).
22nd April, 1963.	"Some Aspects of Medical Climatology" (Dr. R. K. Macpherson, School of Public Health and Tropical Medicine).
29th April, 1963.	Case Report, "Leukaemoid Reaction in Tuberculous Patient" (Dr. K. L. Withers, Institute of Clinical Pathology and Medical Research).
6th May, 1963	"The Art of the Article" Recorded Lecture, (Sir Theodore Fox, Editor of the <i>Lancet</i>).
17th June, 1963.	"Protein losing Gastroenteropathy", (Dr. B. Haneman, Hon. Physician, Lidcombe State Hospital and St. George Hospital).
24th June, 1963.	"Exfoliative Cytology—Survey of the First Year's Findings" (Dr. T. J. Ryan, Institute of Clinical Pathology and Medical Research).
1st July, 1963.	"Auto-Immune Liver Disease" (Dr. Patrick Harvey, Hon. Assistant Physician, Sydney Hospital).
8th July, 1963.	"A. E. Garrod and the Concept of Inborn Errors of Metabolism" (Dr. R. N. Beale, Institute of Clinical Pathology and Medical Research).
15th July, 1963.	"The Pathology and Surgery of Repair" (Mr. N. V. Sweeney, Hon. Assist. Plastic Surgeon, University Teaching Hospitals, University of N.S.W., Hon. Plastic Surgeon, Lidcombe State Hospital).
22nd July, 1963.	"The Evaluation of New Drugs" (Professor I. H. Thorp, Department of Pharmacology, University of Sydney).
29th July, 1963.	"Calcification in Cancers".
	Theoretical Considerations: (Dr. H. Kramer, Institute of Clinical Pathology and Medical Research).
	Illustrative Examples: (Dr. J. C. Booth, Institute of Clinical Pathology and Medical Research).
12th August, 1963.	"Brief Review of Current Literature".
	1. Genetics (Dr. G. Andrews, Lidcombe State Hospital).
	2. Dermatology (Dr. F. Ofner, Lidcombe State Hospital).
	3. Renal Disease (Dr. G. Carter, Lidcombe State Hospital).
19th August, 1963.	"A Case of Sudden Death" (Mr. E. S. Ogg, Government Analyst).
2nd September, 1963.	"Clinico-Pathological Case Report: A Case of Addison's Disease"
	Clinical presentation: Dr. N. F. Fink, Lidcombe State Hospital.
	Pathological features: Dr. K. Withers, Institute of Clinical Pathology and Medical Research.
15th October, 1963.	"An Outbreak of Cocksackie B4 Infection" (Mr. A. M. Murphy, Institute of Clinical Pathology and Medical Research).
	"The Common Cold Viruses" (Mr. J. Cullen, Institute of Clinical Pathology and Medical Research).
22nd October, 1963.	"Fresh Thoughts about Rheumatism" (Dr. Richard Tinsley, Lidcombe State Hospital).
29th October, 1963	"Polluted Air" (Dr. W. Telleson, Randwick Chest Hospital).
5th November, 1963.	"Aspects of Gastric Ulcer" (Dr. B. Billington, Prince Henry Hospital).
12th November, 1963.	"The Behaviour and Management of Soft Connective-Tissue Sarcomas" (Dr. L. Atkinson, Director, Department of Radiotherapy, St. Vincent's Hospital).
19th November, 1963.	"The Physiology and Pathology of Mucus Secretion" (Dr. J. J. Carter, Institute of Clinical Pathology and Medical Research).
	"The Histochemistry of Mucus Substances" (Dr. K. B. Taylor, Institute of Clinical Pathology and Medical Research).
26th November, 1963.	"Obesity".
	Prevention and Management (Dr. E. Connolly, Lidcombe State Hospital).
	Pathological Aspects (Dr. M. D. Frack, Institute of Clinical Pathology and Medical Research).
3rd December, 1963.	"A Normal Metabolite with Unusual Toxic Actions" (Professor E. S. Finckh, Department of Pathology, Sydney University).
10th December, 1963.	"Current Concepts of Shock" (Dr. Gordon Kellerman, Lidcombe State Hospital).

APPENDIX D

THE INSTITUTE OF CLINICAL PATHOLOGY AND MEDICAL RESEARCH

PUBLICATIONS BY STAFF MEMBERS

“ Plasma Therapy in Haemophilia ”*. B. J. Arnold (with W. R. Pitney, Department of Haematology, Royal Perth Hospital, Perth, W.A.). Med. J. Aust. II, 661, 1960.

“ A Sensitive Method for the Colorimetric Determination of Urea ”. R. N. Beale and D. Croft. J. Clin. Path., **14**, 418, 1961.

“ Rapid Incremental Methods for the Determination of Serum Iron and Latent Iron Binding Capacity ”. R. N. Beale, J. O. Bostrom and R. F. Taylor. J. Clin. Path., **14**, 488, 1961.

“ Herpes simplex of the Fingers ”. A. M. Murphy (with A. Chancellor, Merrylands, N.S.W.). Med. J. Aust., I, 517, 1961.

“ Improved Rapid Methods for the Determination of Iron Content and Binding Capacity of Serum ”. R. N. Beale, J. O. Bostrom and R. F. Taylor. J. Clin. Path., **15**, 156, 1962.

“ The Determination of Cholesterol in Serum by Persulphuric Acid Oxidation ”. R. N. Beale and D. Croft. J. Clin. Path., **15**, 221, 1962.

“ The Determination of Urinary 17-ketosteroids by an Improved Zimmerman Reaction ”. R. N. Beale, J. O. Bostrom and D. Croft. J. Clin. Path., **15**, 574, 1962.

“ The Megaloblastic Anaemias ”. B. J. Arnold. Med. J. Aust. II, 698, 1962.

“ Plasma Anti Haemophilic Factor (Factor VIII) Concentrations in Normal Families ”*. B. J. Arnold (with W. R. Pitney, R. L. Kirk and N. S. Stenhouse). Brit. J. Haem. **8**, 421, 1962.

“ A Fatal Case of *Listeria* Septicaemia and Meningitis ”. D. Hansman (with J. C. Farrell, Fairfield District Hospital, N.S.W.). Med. J. Aust., II, 62, 1962.

“ Sensitive Methods for the Titrimetric Micro-Determination of Biological Calcium and Magnesium ”. R. N. Beale and J. O. Bostrom. J. Clin. Path., **16**, 252, 1963.

“ Q Fever among Abattoir Workers in New South Wales ”. A. M. Murphy and D. Hansman (with J. Henson, Medical Officer of Health, Tamworth, N.S.W.). Med. J. Aust., I, 343, 1963.

“ Tetracycline-resistant pneumococcus ”. D. Hansman (with W. Evans, Royal North Shore Hospital). Lancet I, 451, 1963. (Correspondence.)

“ Reaction of the Pentacyanocobaltate (II) Ion with Molecular Oxygen ”*. R. N. Beale (with R. H. Bayston, N. Kelso King and M. E. Winfield, Chemical Physics Section, Division of Industrial Chemistry, C.S.I.R.O., Victoria). Aust. J. Chem. **16**, 954, 1963.

Publications in Press

“ Poliovirus in an Infants' Home ”. A. M. Murphy and N. Martin (with H. Walsh). Med. J. Aust.

“ Biological Copper and its Determination with Acetaldehyde-Oxalyldihydrazide ”. R. N. Beale and D. Croft. J. Clin. Path.

“ N-terminal Residue of Aortic Elastin ”. K. B. Taylor. Nature.

“ Leukaemoid Reactions in Disseminated Tuberculosis ”. K. L. Withers. Med. J. Aust.

“ Coxsackie B4 Virus Infections in New South Wales in 1962 ”. A. M. Murphy and R. Simmul. Med. J. Aust.

Work in Preparation

“ The Isolation of an Unclassified Virus from an Outbreak of Infantile Diarrhoea ”. A. M. Murphy.

“ Studies on an Unusual Group of Enteroviruses ”. A. M. Murphy et al.

“ The Determination of Metachromasia with 1 : 9-Dimethyl Methylene Blue ”. K. B. Taylor.

“ Application of Gas Chromatography to the Investigation of Steroid Metabolites in Urine. Part I. The Determination of Urinary Pregnanediol (5 β -Pregnane-3 α , 20 α -diol) ”. R. N. Beale et al.

“ Application of Gas Chromatography to the Investigation of Steroid Metabolites in Urine. Part II. The Determination of Urinary Oestrone, Oestradiol, Oestriol and epi-Oestriol ”. R. N. Beale et al.

“ A Differential Stain for Acid Polysaccharides ”. K. B. Taylor.

* Work done before joining the staff of the Institute.

APPENDIX E

THE INSTITUTE OF CLINICAL PATHOLOGY AND MEDICAL RESEARCH

ADDRESSES TO LEARNED SOCIETIES AND PUBLIC BODIES BY STAFF MEMBERS, 1963

“Cytology, Carcinoma-in-situ, the Gynaecologist”, by T. J. Ryan. Read before the Australian Regional Council, Royal College of Obstetricians and Gynaecologists, February, 1963.

“The Scheme for the Detection of Uterine Cancer in New South Wales”, by T. J. Ryan. Read before General Practitioners Refresher Course under the auspices of Post-Graduate Committee in Medicine and N.S.W. State Cancer Council, March, 1963.

“How to take a cervical smear” and “The preparation of the cervical biopsy for histological examination”, by H. Kramer and T. J. Ryan. Lecture on closed circuit colour television at Prince Henry Hospital, March, 1963.

“The Gas Chromatograph and its Application to Problems in Clinical Biochemistry”, by R. N. Beale. Read before the Australian Association of Clinical Biochemists, N.S.W. Branch, March, 1963.

“The Isolation and Identification of Pathogenic Viruses”, by A. M. Murphy. Read before the Australian Society for Microbiology, N.S.W. Branch, March, 1963.

“Techniques of Obtaining Specimens in Cancer Detection”, by H. Kramer. Read before the Post-Graduate Committee in Medicine of the University of Sydney, May, 1963.

“Exfoliative Cytology in Gynaecological Cancer”, by T. J. Ryan. Read before Section of Obstetrics and Gynaecology, District Branch of Australian Medical Association, Ryde District Soldiers' Memorial Hospital, June, 1963.

“Early Diagnosis of Cancer in Women”, by T. J. Ryan. Read before the Inverell and District Graduate Nurses' Association, June, 1963.

“The Implications of Cytology” and “Cytology versus Colposcopy”, T. J. Ryan. Lectures at Newcastle under the auspices of the Post-Graduate Committee in Medicine and the N.S.W. State Cancer Council. June, 1963.

“Blood Transfusion: Therapeutic Aspects”, by B. J. Arnold. Read before Seminars in Haematology, Red Cross Blood Transfusion Service, July, 1963.

“Calcification in Cancers”, by H. Kramer. Read before Staff Seminar, Department of Pathology, University of New South Wales and Prince Henry Hospital. August, 1963.

“Geriatric Haematology”, by B. J. Arnold. Read before Geriatric Nursing Course, Repatriation General Hospital, October, 1963.

“Early Diagnosis of Cervical Cancer”, by T. J. Ryan. Read before meeting of District Branch of Australian Medical Association, St. George Hospital, Kogarah, October, 1963.

STATE HOSPITALS AND HOMES

Report of the Director, Division of Establishments to the Director General of Public Health

During 1963 a daily average of 2,227.5 persons were accommodated in the various establishments maintained by the Department of Public Health, viz., Randwick, Garrawarra, Lidcombe, Newington, Strickland and David Berry. The largest of the establishments is Lidcombe where a daily average of 1,467 patients and inmate workers were accommodated.

The Statistical Summary set out herein shows the gross cost of these establishments against Government funds for the year was £1,846,933 against which there was a set off of £491,369 in respect of sales of waste, maintenance charges to patients and payments by the Commonwealth Government.

The net cost of maintenance was £13 10s. 0d. per patient per week as compared with £13 0s. 9d. per week in the previous year.

LIDCOMBE STATE HOSPITAL AND HOME

During the year it became apparent that the cost of the proposed 400 bed multi-storeyed hospital block, and the new and improved services which it would require, rendered it financially impracticable. In view of the recommendations of the Health Advisory Council regarding the establishment of a Geriatric Unit at least in every large General Hospital, further consideration is being given to the number of additional beds which should be included in the proposed new hospital block. This will possibly require a complete re-consideration of the role this unit should fill in the State Hospital field.

A Day Hospital has been established in a building which had fallen into disuse. It is serving a very useful purpose in patient care, and has been instrumental in accelerating the formation of a Hospital Auxiliary.

The Sheltered Workshop conducted by the Civilian Maimed and Limbless Association has moved into larger premises within the hospital, and continues to be of great benefit to a number of the patients.

The Hospital continued, during the year, to receive selected patients from the Mental Hospitals, and to continue to rehabilitate them to the stage that some have left hospital and now live in the community.

The Department of Physical Medicine has now moved into re-modelled premises. At 31st December, 1963, there were still some growing pains, but these should soon be eliminated.

NEWINGTON STATE HOSPITAL AND HOME

The number of female patients remaining at Newington at 31st December, 1963, was 136. It is confidently expected that all female patients who cannot be discharged from Newington will be transferred to accommodation at Garrawarra before the end of 1964. Newington would then exist only for the temporary housing of patients from metropolitan psychiatric hospitals whilst repairs and renovations are being carried out at those hospitals. As at 31st December, 1963, there were 100 patients from Callan Park Hospital being accommodated in the Silverwater Wards.

As mentioned in previous reports Newington is in the process of closing down. The decision was made because industrial activity in the area had made it unsuitable as a hospital site. The Department of Industrial Development and Decentralization is giving consideration to an offer for the purchase of 19 acres of the hospital land and the Department has advised that it has no objection to the release of the land, which at present is being used for grazing purposes.

GARRAWARRA HOSPITAL, WATERFALL

A new and modern nursing home has been completed and is ready for occupation. This Home provides accommodation for 40 nurses and also includes two self-contained flats for female Medical Officers.

The Female Division of the Hospital (Wards A, B, C and D) are being remodelled. This work will be completed in August, 1964, when excellent accommodation for additional patients will be available.

Extensive structural alterations to the main kitchen, now in progress, and installation of modern equipment will greatly improve the preparation and distribution of food at the Hospital.

STRICKLAND HOUSE, VAUCLUSE

On 10th July, 1963, Strickland House was declared an Approved Nursing Home, thus attracting benefits under the National Health Act. During the year it was arranged that the dentist attached to the Division of Dental Services make regular visits to the Hospital.

Extensive renovations commenced during the middle of the year on the Male Inmate Workers Quarters. The renovations will ensure a high standard of accommodation and good recreation facilities for the inmates.

RANDWICK CHEST HOSPITAL

This hospital is the principal tuberculosis hospital administered by the Public Health Department. It provides for investigation and treatment of tuberculosis both by in-patient and out-patient care. It provides X-Ray, Pathological, Surgical and Respiratory Laboratory Services.

A new menu has been introduced and provides an attractive, balanced diet based on nutritional principles. The menu has been well received by patients and staff.

During the year an extensive programme of maintenance work has been started by the Public Works Department. Internal painting and covering of floors with vinyl asbestos tiles have been carried out in several wards. The Female Staff Amenities block has been renovated.

A commencement has been made on enlarging and improving the surgical facilities so as to provide more beds for recovery of patients after surgery and new theatres.

The number of out-patients treated, which was commented on last year, has continued to increase until over 110 a week are now being seen.

DAVID BERRY HOSPITAL

This small hospital continued to give service as a general hospital for the residents of the Berry district.

G. S. PROCOPIS, Director,
Division of Establishments.

The Director-General of Public Health.

Lidcombe State Hospital—Annual Report, 1963

POPULATION STATISTICS

Number of beds available as at 31st December, 1963:—

Hospital	891
Home Section	753
Total	1,644

Daily average number of patients resident in hospital and home sections:—

1954	1,216	1959	1,484
1955	1,297	1960	1,446
1956	1,347	1961	1,487
1957	1,374	1962	1,498
1958	1,475	1963	1,467

Admissions, Transfers, Discharges and Deaths:—

Admissions	Hospital Section	Home Section	Total
In institution 1st January, 1963	800	649	1,449
Admissions	1,054	1,484	2,538
Transfers within institution	772	633	1,405
Total	2,626	2,766	5,392
Discharges and Deaths—			
Discharges	666	1,340	2,006
Deaths	504	21	525
Transfers within institution	633	772	1,405
In institution 31st December, 1963	1,803	2,133	3,936
Total	823	633	1,456
Total	2,626	2,766	5,392

Casual Relief: 441 indigent persons were provided with sleeping accommodation for one night and 882 were supplied with a meal.

Surgical Operations: Operative procedures for 1963 were as follows:—

	1962	1963
General Surgery	259	257
Urological	44	63
Orthopaedic Surgery	82	78
Ophthalmic Surgery	44	29
Plastic Surgery	10	46
E.N.T. Surgery	6	6
Neuro-Surgery .. .. .	..	2
Dental Surgery	25	17
Endoscopic Examinations	74	164
Total	544	662

In addition Electroconvulsive Therapy (requiring general anaesthesia) was given as follows:—

11 (1962)	35 (1963)
-------------------	-----------

Anaesthetic Services: The anaesthetists on the staff of Lidcombe State Hospital supply anaesthetic services to the following Departmental Hospitals: North Ryde Psychiatric Centre, Psychiatric Research Unit, Callan Park, Callan Park Hospital, Broughton Hall Psychiatric Clinic, Parramatta Psychiatric Centre, Randwick Chest Hospital and Peat and Milson Islands Hospital.

	1961	1962	1963
Total Anaesthetics given	547	1,222	1,397
<i>Other Special Services—</i>			
Physiotherapy Treatments		7,832	
X-Ray Examinations		5,109	patients
Autopsies		273	.....
Electrocardiograms		1,304	

Standard Staff Establishment

Full details of this were given in last year’s report. The following additions to the establishment were made in 1963:—

- Honorary Visiting Physicians (2).
- Honorary Senior Surgical Consultant (1).
- Indoor Attendants (4).
- Cleaner (1).

FUNCTIONS AND RESPONSIBILITIES

Building activities undertaken by the Department of Public Works during 1963 have included the following:—

- (1) Remodelling of the “ Kitchen Block ” in the chronic wards section of the Hospital to convert it to a Department of Physical Medicine and Rehabilitation. This has now been completed.
- (2) Remodelling of Ward 29 (for Blind Patients) as a “ project ”, now completed.
- (3) Remodelling of Dormitory 36 as a “ project ”, still in progress.
- (4) Construction of a Central Sterilising Department adjacent to the operating theatre block, now completed.

The above alterations have led to a redistribution of patients as follows:—

Patients for intensive rehabilitation procedures now occupy Ward 26A (previously a chronic ward) as it is nearest to the new Department of Physical Medicine and Rehabilitation. Ward 10, previously occupied by these patients has reverted to a “ convalescent ward ” and Ward 12, previously the site of the Department of Physical Medicine, has become the Sheltered Workshop.

Owing to the number of patients with pulmonary tuberculosis falling to less than 30, the remodelled Ward 29 has become the tuberculosis ward and Ward 24, previously the tuberculosis ward, has become a chronic ward.

The blind patients from Ward 29, temporarily housed in Ward 28A, will remain there until the conversion of Dormitory 43 to an appropriate ward has been completed in 1964.

A highlight of the year was the completion of the new Church and Concert Hall and associated recreation area. This outstanding architectural feature has formed, since then, the focal point of most of the social activities of the Hospital. The opening, performed by the Minister for Health, Mr. Sheahan, followed by a dedication service for the Chapel, was an impressive ceremony which took place early in September. A fine piano and organ make the new hall the musical centre of the hospital.

An important appointment for this year was that of our first Resident Chaplain, the Rev. F. Turvey.

Other welcome recruitments were: a Recreation Officer, a Medical Gymnast, and Instructor in Woodwork, and E.E.G. Recordist, a Speech Therapist and a Chiropodist, each of whom has added greatly to the efficiency of the hospital's services.

The Lidcombe State Hospital Auxiliary was created early in the year and has functioned effectively. It has already made a considerable improvement in the social welfare of our patients. As part of its activities, a local newspaper, the *Auburn Review* has made Lidcombe State Hospital its No. 1 project regarding public relations and publicity.

The patients' monthly publication *The Forum* has continued successfully throughout the year, largely due to the enthusiasm and industry of its patient-editor.

A fortnightly publication *Staff News* has recently been produced by members of the attendant staff.

The Sheltered Workshop deserves more than passing mention. Developing from the original co-operative venture with the Civilian Maimed and Limbless Association it now operates in old Ward 12 and at present employs up to 20 patients. Considerable future expansion is anticipated.

Another interesting development is the Day Centre, situated in the Annexe of the old Dining Room. Here some 50 residents from dormitories spend the day under protected conditions. A good deal of the work of maintenance of the centre is the responsibility of a group of patients from FRATA House.

In addition to the work performed by the Hospital Auxiliary, there has been a very considerable contribution to the welfare of the Hospital by individual well-wishers and voluntary groups, in the visitation and entertainment of patients and arranged excursions. A sports ground for paraplegics and another sports area for general use were levelled and cleared by voluntary effort.

The Hospital was visited in October by Dr. Frank Cooksey, an eminent English authority on Physical Medicine and Rehabilitation.

A week-end course in Geriatrics, under the sponsorship of the Post-Graduate Committee in Medicine also took place in October.

A residential course in management at Coogee Bay was attended by the Medical Superintendent and the Manager.

Dr. T. O'Connell and Dr. G. Kellerman were both successful in the final examination for the Fellowship of the Faculty of Anaesthetists Royal Australian College of Surgeons.

A radio call system for rapid contacting of medical and other staff has been installed.

Staff meetings, seminars, medico-social clinics, death meetings, Joint Consultation and Welfare meetings have continued throughout the year.

Recruitment of trained nursing staff is still proving a difficult problem. It must be admitted that this Hospital is lacking in nursing staff, not only in the quantity but in the quality required to offer geriatric nursing at the standard expected in a modern community.

A change of plans has been necessary in regard to the New Hospital Block owing to the inability of the Treasury to accept the costs involved. It is expected that in 1964 a start will be made on a 200 bed block instead of the 400 bed block originally planned.

Strickland House, Vacluse—Annual Report, 1963

(a) STAFF

Matron	1
Visiting Emergency Medical Officer	1
Clerical Officer	1
Office Assistant	1
Trained Nurses	5
Assistant Nurses	7
Female Domestic Staff	11
Day Attendants	2
Night Attendant	1
Occupational Therapist	1 vacancy
Part-time Seamstress	1 vacancy

(b) BRIEF STATEMENT OF FUNCTIONS AND RESPONSIBILITIES

This hospital is no longer an approved Benevolent Home under Section 18 of the Social Services Act. The Director General of Social Services withdrew such approval on 23rd May, 1963. Strickland House (Female Division) Vacluse became an Approved Nursing Home on 10th July, 1963. The functions of this hospital are to provide accommodation for 108 female patients and 21 inmate workers. The responsibilities of this hospital are the care and welfare of the female patients and male inmate workers.

(c) DESCRIPTION OF ROUTINE WORK CARRIED OUT DURING THE YEAR

Normal routine nursing of aged and invalid patients was carried out during the year with a weekly visit from the Medical Officer attached to Randwick Chest Hospital. Sick female patients requiring medical attention were transferred to Randwick Chest Hospital for treatment. Sick inmate workers requiring medical treatment were transferred to Lidcombe State Hospital. During the year 45 female patients were admitted through the Social Worker of this Department, 80 male inmate workers were admitted through the Hospital Admission Depot, 93 Macquarie Street, Sydney.

(d) STATISTICAL APPENDIX DEALING MAINLY WITH POPULATION FIGURES

	1962			1963		
	Female Patients	Male Inmate Workers	Total	Female Patients	Male Inmate Workers	Total
Admitted	87	71	158	45	80	125
Discharged	66	69	135	52	78	130
Daily Average	99.6	19.2	118.8	100.6	19.7	120.3
No. of bed days	36,353	7,022	43,375	36,717	7,195	43,912

Newington State Hospital—Annual Report, 1963**(a) STAFF**

Hon. Medical Staff: Neurologist—vacant. Ophthalmic Surgeon—vacant.

Medical Staff: J. McMANAMEY, Medical Superintendent, M. HENLEY, Medical Officer, Vacant, Medical Officer.

Clerical Staff: Manager, Senior Clerk, Incremental Clerk, 3 Office Assistants.

Nurses: 49.

Male Outdoor Staff: 33.

Female Outdoor Staff: 31.

(b) ADMISSIONS AND DISCHARGES

	Hospital (Female)	Male Inmates	Callan Park Section (Males)
Remaining in Institution, 1st January, 1963 ..	134	71	111
Admissions during year	67	290	287
Subtotal 1	201	361	398
Discharges during year	33	296	296
Deaths during year	32	Nil	2
Subtotal 2	65	296	298
Remaining in Institution as at 31st December, 1963	136	65	100
Average Daily Number Resident	136	71	105

The Female Yard Section which was re-opened on 10th September, 1962, to provide temporary accommodation for male patients from Callan Park Hospital whilst wards at that hospital are being renovated is still in use.

Randwick Chest Hospital

The following are statistics summarizing activities of the Hospital during the twelve months ending 31st December, 1963.

INDOOR PATIENTS

	Male	Female	Total	Male	Female	Total
Patients under treatment on 31st December, 1962				130	45	175
Admitted during 1963				318	163	481
				448	208	656
Died during 1963	56	19	75			
Discharged during 1963	266	131	397			
Total Died and Discharged during 1963				322	150	472
Remaining in Hospital on 31st December, 1963				126	58	184
Daily Average Number of Resident Patients						168
Number of Individuals who Received Outdoor Treatment						3,426
Total Number of Visits by Outpatients						5,913

INMATE WORKERS

In the Institution on 31st December, 1963	..	..	..	..	..	..	..	9
Admitted during 1963	..	..	..	..	..	..	..	14
								23
Discharged during 1963	..	..	..	..	..	..	..	12
								11
Remaining in the Institution on 31st December, 1963	..	..	..	..	..	..	..	179
General Daily Average Number Including Workers..	..	..	..	..	..	..	..

AUTOPSIES

There were 75 deaths during the year and 18 autopsies were performed.

X-RAY DEPARTMENT

X-Ray Examinations	4,312
Barium Meal Examinations	..	..	..	..	..	..	..	..	61
Screenings	..	..	..	..	..	..	..	..	60
Films Used	..	..	..	..	..	..	..	..	7,336
Dental Films Used	..	..	..	..	..	..	..	..	23
Tomograms	..	..	..	..	..	..	..	..	136
Portables	..	..	..	..	..	..	..	..	287

PATHOLOGICAL LABORATORY

Specimens Submitted for Examinations	12,714
--------------------------------------	----	----	----	----	----	----	--------

OPERATIONS PERFORMED

Major Thoracic—									
Lobectomy	..	..	..	..	..	..	..	..	10
Segments	}	..	..	..	..	..	..	..	8
Wedges		..	..	..	..	..	..	..
Cones		..	..	..	..	..	..	..	4
Decortication	..	..	..	..	..	..	..	..	6
Thoracotomy	..	..	..	..	..	..	..	..	6
Rib Resection..	..	..	..	..	..	..	..	..	1
Oesophagectomy	..	..	..	..	..	..	..	..
Minor Thoracic—									
Bronchoscopy	..	..	..	..	..	..	..	..	49
Bronchial Biopsy	..	..	..	..	..	..	..	..	19
Oesophagoscopy	..	..	..	..	..	..	..	..	5
Miscellaneous	..	..	..	..	..	..	..	..	6
Major General	..	..	..	..	..	..	..	..	15
Minor General	..	..	..	..	..	..	..	..	26
Orthopaedic	..	..	..	..	..	..	..	..	2
Urological	..	..	..	..	..	..	..	..	12
Ear, Nose and Throat	..	..	..	..	..	..	..	..	12
Dental	..	..	..	..	..	..	..	..	3
Blood and Saline, Transfusions and Infusions	..	..	..	..	..	..	..	..	114

SURGICAL WARD

Admissions—						Male	Female	Total
Thoracic	..	..	..	..	..	24	10	34
General	..	..	..	..	..	15	11	26
						39	21	60
Day Only and Recovery Patients	..	..	..	..	..	44	13	57

The undermentioned schedule illustrates the fluctuation in the number of patients in residence since the peak year of 1954.

1954	..	..	..	..	267	1959	..	..	..	158
1955	..	..	..	..	260	1960	..	..	..	151
1956	..	..	..	..	240	1961	..	..	..	160
1957	..	..	..	..	202	1962	..	..	..	160
1958	..	..	..	..	204	1963	..	..	..	168

STANDARD ESTABLISHMENT

Visiting Specialist Staff—

Oto-Rhino-Laryncologist	..	..	..	..	..	..	..	1
Urologist	..	..	..	..	..	..	..	1
Consultant Thoracic Surgeons			..	..	..	..	..	2
Dermatologist	..	..	..	..	..	..	..	1
Orthopaedic Surgeon	..	..	..	..	..	..	..	1
Consultant General Surgeons			..	..	..	..	..	2
Consultant Physician	..	..	..	..	..	..	..	1
Radiologist	..	..	..	..	..	..	..	..*
Ophthalmologists	..	..	..	..	..	..	..	2
Neuro-Surgeon	..	..	..	..	..	..	..	1
Consultative Panel	..	..	..	..	..	..	..	3
Anaesthetists	..	..	..	..	..	..	..	2**

* Dr. Munro now fulltime Departmental Service.

** The Hospital can call on the services of Departmental Specialist Anaesthetists when necessary.

Resident Medical Staff—

Medical Superintendent	1
Deputy Medical Superintendent		..	..	..	..	..	..	1
Surgical Registrar	..	..	..	..	..	..	..	1
Medical Officers	..	..	..	..	..	..	..	4
								7

Nursing Staff—

Matron	1
Sub-Matron	1
Home Sister	1
Sisters, Theatre and Nurses (Female)	104
Attendants (Male)	25
	<hr/>
	132

Clerical Staff—

Secretary	1
Clerk (Male) .. .	1
Shorthand-Typist .. .	1
Office Assistants... ..	2
Record Clerk (Female)	1
Clerk (Female) .. .	..

Medical Auxiliary Staff—

Medical Laboratory Technologist	1
Almoner .. .. .	..	..	..	..	..	..	..	..	1
Occupational Therapists	..	..	..	..	..	..	..	..	2
Radiographers .. .	..	..	..	..	..	..	..	..	2*
Dispenser .. .	..	..	..	..	..	..	..	..	1
Dispensary Assistant	..	..	..	..	..	..	..	..	1
Microbiologist .. .	..	..	..	..	..	..	..	..	1
Laboratory Assistant	..	..	..	..	..	..	..	..	1
Laboratory Attendant	..	..	..	..	..	..	..	..	1
* Part-time radiographer on staff at Garrawarra									11

Domestic Staff—

[illegible]

Miscellaneous—

Outdoor Supervisor	..	..	..	..	..	..	..	..	1
Catering Officer	..	..		..	..	..	..	..	1
Storemen	..	..	..	..	..	..	..	..	2
Carpenter..	..	..	..	..	..	..	..	..	1
Engineer ..	..	..	..	..	..	..	..	..	1
Painter ..	..	..	..	..	..	..	..	..	1
Firemen	..	..	..	..	..	..	..	..	3
Maintenance of Grounds—									
Outdoor Staff, Flower Gardener	..	..	..	..	..	..	..	..	6
Male Cleaners	..	..	..	..	..	..	..	..	8
									—
									24
									—
Visiting Clergymen..	..	..	..	..	..	..	..	..	4
Librarian ..	..	..	..	..	..	..	..	..	1

Staff Shortages

Nursing ..	..	..	..	..	..	..	..	..	16
Domestic ..	..	..	..	..	..	..	..	..	8
Medical Auxiliary	..	..	..	..	..	..	..	..	3
Medical Officers	..	..	..	..	..	..	..	..	1
Miscellaneous ..	..	..	..	..	..	..	..	..	Nil
									—
									28
									—

FUNCTIONS AND RESPONSIBILITIES

Although admissions have been much the same in numbers as the preceding year, there has been an increase in the number of tuberculous cases to such an extent that male beds have been filled to capacity, and for the first time in years a waiting list has at times existed at the Hospital.

Although middle-aged to elderly patients have still constituted the greatest number of patients there has been a significant increase in the admission of younger patients both male and female with active tuberculous lesions.

Despite the fact that accommodation has been available in the few remaining Sanatoria, many beds in the Hospital have been frozen by respiratory cripples, unsuitable for Sanatoria, who have had to remain as inpatients because they require the aids of a thoracic unit. It would be desirable to house such cases in a suitable chronic hospital with adequate facilities so that beds in thoracic units could be freed for more urgent cases and those requiring investigation.

The volume of work has been maintained in most departments of the Hospital and there has been a great increase in the number of individuals receiving outdoor treatment and in the total number of visits by outpatients.

The building maintenance programme for 1963-64 is well advanced, five wards have been painted internally and their floors lined with vinyl tiles, concrete ramps have been completed at the entrances of nine wards, new gas stoves have been installed in five wards. In the administrative building the electric Switch-board has been replaced and the water service renewed. Shower and lavatory facilities have been provided at the boiler house, the operating theatre autoclave has been replaced and a fence has been erected to enclose the rear of Wards 20 to 28. Alterations to the female staff amenities block have been commenced, renovations and additions to the surgical block have been initiated.

The Hospital has been without the services of a Social Worker the whole of the year and towards the end of the year suffered the resignations of the Medical Technologist and an Occupational Therapist. There has been a vacancy for a medical officer for over a year.

Two courses have been completed—the Departmental Course in General Nursing and the Post-Graduate Course in Tuberculosis and Other Chest Diseases.

Members of the medical staff as in previous years have attended Lidcombe State Hospital as thoracic consultants, the Haymarket Branch of the Tuberculosis Division to monitor miniature films, and Strickland House has been visited regularly.

The Staff Social Club and Patients' Club have conducted a number of successful functions—dances, concerts, competitions, barbecues. The Randwick Chest Hospital Ladies' Committee has held a card evening and a games night and conducted a barbecue for upgraded patients.

Thanks are recorded to the various voluntary bodies who have given their services willingly to the Hospital including the Police Choir and the W.D. & H.O. Wills Raleigh Park Concert Party.

Garrawarra Hospital, Waterfall—Annual Report, 1963

STAFF

In August, Dr. N. C. Wright who had been Superintendent for many years, resigned and Dr. W. K. Manning was appointed to the position.

ACTIVITIES

The major activities of the year were the commencement of an extensive renovation programme by the Public Works Department on the Female Division of the Hospital which had been closed for some years and the commencement of building of a new Nurses Home under private contract.

These two projects when completed will provide accommodation for 104 additional patients and 40 additional nursing staff.

The prospect of a 50 per cent increase in the patient-load has led to an examination of the adequacy of existing services to cope with this increase; in particular, it has been clear that the laundry service would not be able to cope with the increased demand unless some changes were made. The change-over from tuberculous to geriatric patients has resulted in a marked increase in the requirement of linen per patient to be laundered.

Investigation has revealed some serious deficiencies in operational technique which it is hoped can be rectified. It is expected that the output can be raised sufficiently to cope with the anticipated demand; however, one serious difficulty in the laundry is the undue reliance on Inmate Worker labour and the only remedy here is an increase in staff establishment.

A systematic review of other hospital services—medical records, food service, use of drugs, sewage disposal, garbage disposal, grounds maintenance—has been conducted; many deficiencies and difficulties in regard to these services have been revealed; some of these have been remedied and others it is hoped will be remedied in the near future.

Use of Drugs

The range of drugs in use has been reduced and rationalised, resulting in considerable reduction in cost without any lowering of standards.

GROUNDS MAINTENANCE

Activity has been initiated to bring weed infestations under control and to review the landscaping and layout of the grounds.

TRENDS IN PATIENT POPULATION

It is felt that during the latter half of 1963 the type of patient admitted was in general much sicker and more feeble than the average of the existing patient population.

HOSPITAL STATISTICS

							Number of Beds Available	
							as at 31st December 1962	as at 31st December 1963
Male Patients	..	..	..	..	..	..	61	61
Female Patients	..	..	..	..	..	..	130	130
Male Workers	..	..	..	..	..	..	89	89
							Male Patients	Female Patients Workers
Remaining in Hospital, 31st December, 1962	..				..	..	58	126 65
Admitted during 1963	..	..	..	..	..	..	45	39 442
Total Treated during 1963	..	..	..	..	..	..	103	165 507
Discharged during 1963	..	..	..	..	..	..	34	23 435
Died during 1963	..	..	..	..	..	..	12	13 ..
Remaining in Hospital, 31st December, 1963	..				..	..	57	128* 72
Average Daily Number Resident	..	..	..	..	..	..	59	126.8 68

* Does not include 1 patient remaining on leave.

Beds Available as at 31st December, 1963					30
Daily Average Number of Patients Resident—									
1956	14.32	1960	12.68
1957	13.3	1961	12.93
1958	12.25	1962	13.76
1959	15.49	1963	11.4

Admissions during 1963	406
Subtotal	422
Discharges	403
Deaths	10
								413
No. in Hospital, 31st December, 1963	9

										1962	1963
Major	36	20
Minor	56	15
Anaesthetics—35.											
X-Rays—489.											
Autopsies—1.											

Hon. Visiting Physician	1
Hon. Visiting Surgeon	Nil
Nurses	13
Clerk	1
Outdoor Staff	12

- (1) Laying of linoleum tiles in the wards throughout.
- (2) Laying of vinyl tiles in the kitchen.
- (3) Re-painting and new sinks for kitchen.
- (4) Painting nurses dining room, domestics room and sterilizing room.
- (5) Verandah and female ward glassed in.
- (6) New ceiling and painting of laundry.

David Berry	11.4
Strickland	120.3
Garrawarra	253.8
Randwick	168
Newington	207
Lidcombe..	1,467
Total Daily Average			2,227.5

Statistical Summary

TABLE 1—SUMMARY OF EXPENDITURE—RANDWICK CHEST HOSPITAL, STRICKLAND HOUSE, GARRAWARRA HOSPITAL, STATE HOSPITALS AND HOMES, LIDCOMBE, NEWINGTON AND DAVID BERRY HOSPITAL FOR THE TWELVE MONTHS ENDED 30TH JUNE, 1963.

Head of Expenditure		Randwick		Strickland		Garrawarra		Lidcombe		Newington		David Berry		Total	
		£	s d.	£	s d.	£	s d.	£	s d.	£	s d.	£	s d.	£	s d.
Salaries and Payments in the nature of salaries	..	223,173	18 6	27,136	8 8	168,761	3 2	584,962	16 3	134,788	7 11	24,387	5 6	1,163,210	0 0
Provisions	..	33,687	11 5	13,731	0 6	36,492	10 2	137,591	9 8	37,321	13 1	2,493	16 11	261,318	1 9
Drugs, Surgical Appliances, Dressings, etc.	..	20,656	19 8	701	7 3	3,952	9 4	36,840	5 3	6,057	10 11	1,047	19 2	69,256	11 7
Domestic utilities, including laundry expenses household linen, clothing furniture, etc.	..	5,613	8 11	...	...	10,146	10 1	57,200	11 2	9,046	0 3	3 11	6	82,010	1 11
Fuel, Electricity and Water	..	7,569	14 7	6,774	11 0	11,697	11 4	38,269	8 3	8,353	7 0	1,141	19 6	73,806	11 8
Renewals and Renovations to buildings and plant	..	13,798	18 0	13,140	3 11	22,940	6 1	62,521	11 8	13,221	9 10	1,474	9 10	127,096	19 4
General Establishment	..	15,582	9 4	3,703	1 0	10,325	13 1	30,810	12 9	7,284	16 4	2,528	6 6	70,234	19 0
Gross Maintenance Expenditure	..	320,083	0 5	65,186	12 4	264,316	3 3	948,196	15 0	216,073	5 4	33,077	8 11	1,846,933	5 3
Collections for Sales, maintenance and payments by Commonwealth Government	..	3,879	12 2	17,962	11 8	85,687	14 3	314,605	4 3	46,888	3 6	22,346	5 2	491,369	11 0
Net maintenance cost to State	..	316,203	8 3	47,224	0 8	178,628	9 0	633,591	10 9	169,185	1 10	10,731	3 9	1,355,563	14 3
Average daily population	..	165		122		247		1,479		320		12		2,345	
Average Annual cost per patient on gross maintenance expenditure	..	1,939	17 11	534	6 4	1,070	2 1	641	2 2	675	4 7	2,756	9 1	787	12 2
Average weekly cost per patient on gross maintenance cost to State	..	37	4 1	10	4 11	20	10 5	12	5 11	12	19 0	52	17 3	15	2 1
Average annual cost per patient on net maintenance cost to State	..	1,916	7 8	387	1 8	920	7 7	569	6 10	640	13 11	1,079	2 4	703	19 3
Average weekly cost per patient on net maintenance expenditure	..	36	15 1	7	8 6	17	13 0	10	18 4	12	5 9	20	13 11	13	10 0
Capital expenditure not included in maintenance..	..	....		518	19 2	3,363	10 4	94,257	6 1	167	9 11	....		98,307	5 6



